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LOST IN SPACE

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THE TWO-DIMENSIONAL SPACE

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More than a hundred years ago, Camillo Sitte published a small text¹ meant to serve as a handbook to urban planners and aediles. At the time, Sitte was director of the School of Applied arts in Vienna.² The book itself was occasioned by the new developments of the greater Vienna, in particular with the urban arrangements of the freed space once occupied by fortifications and meant, during the Belle Epoque, to become what is known today as the Wiener Ringstrasse. His critique is pointing at the aesthetic shortcomings of modern city spaces and is aimed to unveil by comparison those virtues of traditional urban arrangements that could still be used to improve our cityscape. Although strongly marked by his century's naive aestheticism, Sitte's text is still actual today and does indeed influence some contemporary ways to approach urban planning as an alternative to the dominant progressist trend.³

Sitte lays the blame on the fact that since the late Renaissance, instead of resulting from complex evolution, layouts of towns are produced on the drawing board according

¹ *Der Städtebau nach seinen künstlerischen Grundsätzen*, 1889, French translation: *L'art de bâtir les villes*, Le Seuil, Paris, 1996.

² He founded the School in 1883 and ran it until his death, in 1903.

³ Cf. Françoise Choay, *L'urbanisme, utopies et réalités*, Le Seuil, Paris, 1965, pp. 42-43, 58 sq. and 359.

to mere geometrical principles. Of course, there have always been newly designed whole settlements, usually following some disaster. It is enough to mention the grid plans drawn by Hippodamus for the Ionic town of Miletus,⁴ although more ancient and no less famous examples are also at hand, such as the layout of the new city of Akhetaton (today called Tell-el-Amarna), capital of the new state religion invented by pharaoh Amenhotep IV of the 18th dynasty.⁵ Consequently, it is not being designed that radically changed the cityscape in modern times.⁶ Rather, it is “only in our *mathematical* century that the building and extension of cities have become almost exclusively technical matters”.⁷

Architectural drawings – layouts, cross-sections or elevations, but also perspectives, axonometric drawings and diagrams – are two-dimensional representations of three-dimensional arrangements. Exceptions to this rule are the models featuring, usually at a reduced scale, planned, measured, or reconstituted architectural structures. This fact,

⁴ Rebuilt after its defeat in war by neighbouring Samos in 442 BC.

⁵ As early as 1353-1336 BC. Amenhotep IV also changed his own name to Akhenaton to mark the move from the cult of old god Amon to the worship of newly installed Aton. He planned the state religion as he did with the new town, thus setting a model for modern religious reformers.

⁶ The success of Cerdà's plan for Barcelona is a good example for a modern re-interpretation of “Hippodamic” grid disposition. The diagonal avenues are one source of this success: the triangular “left-overs” at their intersection points with the rectangular scheme result in interesting solutions of small squares or angular buildings. On the other hand, without giving up the main scheme (even the Latin cross layout of the *Sagrada Família* had to be fitted into just one square of the grid), enough liberty was given to individual buildings to escape from a monotonous city scape.

⁷ Camillo Sitte, *op. cit.*, p. 2 (my translation and italics). By mathematical, according to the context, he plainly refers to geometrical determinism.

a commonplace, relies on the convention according to which physical space can be measured – thus *determined* – by setting it into three-dimensional, rectangular reference system. All our actions concerning the making and reading of architectural plans are conducted on the grounds of Euclidean geometry and two-dimensional representation on flat surfaces – be it a drawing board or a computer screen.⁸

Tracing lines on a surface seems in itself as old an occupation as humankind. People from ancient cultures began putting linear figures on everything, from their tools to their own bodies, as early as the Palaeolithic.⁹ It is almost as if *Homo Sapiens* would equally be a *Homo Delineator*. Architectural drawing must have emerged quite naturally from the everyday practices of our species of born draughtsmen. Today still, all architectural training is based on two-dimensional representation, regardless to the medium used. Drawing looks like an unavoidable phase in representing architecture – ancient or new, just conceived or listed as historical monument. The process of planning must undergo its conversion through *projection* into two-dimensional figures before becoming objective reality. Drawn architecture is the intermediate stage between imagined and built structures. Extant buildings are

⁸ I do not make any distinction here between the “reality” of pencil lines (in fact tiny bits of coal spread on a relatively rough paper surface) and the “virtuality” of digitised data. Both media are similar from my point of view as both operate with the abscissae and ordinates of a Cartesian reference system.

⁹ Cf. Julius E. Lips, *The Origin of Things*, Hungarian translation: *A dolgok eredete*, Tudományos könyvkiadó, București, 1962, archaeologists have found pigment quarries dating back to the last glacial period (p. 79). From the same epoch, stamps are known to have been used to apply decorative motifs on the skin (p. 87). The Aurignacian paintings and scratched decorations also bear witness to highly developed techniques for two-dimensional representation.

eventually turned “backwards” on to the sheet of paper in order to become files in a record.

When plans are drawn with the purpose of erecting – or restoring – a built structure, we need orthogonal projections, where all the measurements are reduced with precision to a smaller scale. These are usually horizontal and vertical cross sections and views. The mental combination of these highly conventional figures gives an approximated image of what the building proper should be like. Following them, buildings can actually be raised. When less technicality is required, like in the case of presentations in front of an audience not familiar with reading a plan, we use perspective or axonometric drawing, where – still in two dimensions – the illusion of volume is produced by showing on the same plate more than one (two-dimensional) faces of the architectural structure. In spite of more likeness with three-dimensional things, these representations are but more elaborate projections within the same Cartesian system. The rather simple rules of the linear perspective drawing we still use today have been elaborated by painters during the Renaissance on the grounds of geometry and direct observation.¹⁰

With perspective drawing, a first possibility for confusion arises. When it serves as architectural drawing, it no longer

¹⁰ Paolo Uccello may well be considered the “inventor” of linear perspective, but the method was approached gradually during the *Trecento* and perfected in time to reach remarkable complexity. See for instance Albrecht Dürer, *Schriften und Briefe*, Leipzig, 1973, Hungarian translation: *A festészetről és a szépségről*, Corvina, Budapest, 1982, the chapters “A ‘perspectiva naturalis’ Euklidész nyomán”, pp. 240-245, and “Segédeszközök a perspektivikus rajzoláshoz”, pp. 249-251, or Leonardo da Vinci, *Trattato di Pittura*, Romanian translation: *Tratat despre pictură*, Merdiane, București, 1971, Chapter five, “Despre lumină și despre perspectivă”, pp. 165-241.

plays as a tool to support artistic representation. Unless a “sign” for fictitious space, perspective drawing becomes deceptive. Turned inside-out on architecture, it opens the way to the geometrical manipulation of spaces. Of course light effects, trompe l’œil and mirrors have been used before, but it is Mannerist architectural and urban planning that for the first time deliberately distorts surfaces, proportions, and volumes in order to pursue visual illusions.¹¹ Quite the opposite of what Classical Greek “optic corrections” were about. Slight deformations of the straight line and of the rhythm were used there to compensate the imperfections of visual perception. In modern times, the same uncertainties of visual perception are used – and abused – to induce spatial deception.

Hence the false belief that the two realms are inter-changeable. Instead of drawing buildings, more often than not, we build drawings – needless to say, under the auspices of artistic autonomy. If space and drawing are completely convertible into one-another then the former can well do with merely two dimensions the way the latter does.¹²

Following an argument of Françoise Choay,¹³ cyberspace appears like yet another recent reduction – though probably

¹¹ For the whole panoply of Mannerist and Baroque means to construct an illusionist world see Gustav René Hocke, *Die Welt als Labyrinth*, Romanian translation: *Lumea ca labirint*, Meridiane, București, 1973.

¹² The work of the Dutch graphic artist M. C. Escher needs to be mentioned here as it bears much relevance to where the true place of perspective games is. Beyond their ludicrous fascination, some of Escher’s *concetti* can be read as ironic rendering of planned spaces whose conceptual simplicity is camouflaged by intricate composition and cunning *ingenio*. Cf. *M. C. Escher – Grafiek en teekeningen*, Taschen, Köln, 1994.

¹³ Françoise Choay, “Patrimoine urbain et Cyberspace”, *La Pierre d’angle*, Nr. 21/22, Paris, October 1997.

not the ultimate one – of arranged¹⁴ space to two-dimensionality. Virtual space, 3D simulation, or digital reconstitution of architectural spaces¹⁵ are part of a meta-reality easily and often mistaken for the corporeal one. There is no point in arguing about the usefulness of the global network. What should be indicated however, is the pitfall of misjudging the *instrumental* nature of it. Unless we do so, confusing the tool currently called cyberspace with a level of spatial reality only pushes us farther into the reification of our world. This is precisely the mistake Heidegger is warning us against when he talks about the question of making.¹⁶

According to Sitte, there is a shift of emphasis from the streets and squares as public spaces delimited by buildings – thus being a unifying urban realm between the spaces enclosed by these – to the buildings as constructed masonry islands¹⁷ separated by traffic ways. From urban spaces sheltering social intercourse, streets tend to become built structures specialised merely in fast transportation connecting other structures specialised in other functions. In other words, the spatial and cultural entity of the traditional street becomes a surface to ensure horizontal translation.

¹⁴ “Arranged space” seems an appropriate phrase to designate artificially produced environment that includes spaces obtained with the means of architecture, gardening, engineering or barely modified natural spaces, merely inhabited ones.

¹⁵ See also by Françoise Choay a sharp critique of the confusion between “virtual” and “real” architecture in “L’architecture d’aujourd’hui au miroir du ‘De re aedificatoria’”, *Albertiana*, pp. 10 sq.

¹⁶ The misunderstanding of *Ge-stell* – the word is re-invented by Heidegger to express the essence of technique – is seen as a major threat for the possibility of Man to approach truth. Cf. Martin Heidegger, *Die Frage nach der Technik*, Romanian translation: *Întrebarea privitoare la tehnica*, in *Originea operei de artă*, Humanitas, București, 1995, pp. 145 sq.

The distance from there to the puerile illusion of buildings as self-standing, even self-sufficient objects is easily bridged. Today we already have worldwide plethora of high-rise buildings whose common denominator is their kinship to capsulated containers where the “external” world, inhabitants included, penetrates through successive layers of filters. Inhabiting, or rather *using* them would be impossible without the complicated building machinery that can include, besides the all too common electricity, water supply and sewage, elevators, water tanks or air-conditioning, computer-regulated suspension to counter-balance wind pressure or earthquakes. They are indeed dwelling machines, materialisation of the *machine à habiter* nightmared about by Le Corbusier.¹⁸ The best examples for this scheme are the atrium-lobbied skyscrapers, where the building engulfs the courtyard and the garden turned indeed into an artificial microclimate. But any high-rise building¹⁹ would do to illustrate the strive to technically and aesthetically controlled space arrangements. Yet, the more sophisticated the building technology, the more mechanical inhabiting becomes, bringing edifices always closer to the state of utilitarian objects. Instead of buildings and towns, a *Brave New World* kind of machine-dominated

¹⁷ It must not be a coincidence that in French urban planning jargon built blocks are called *îlots*. American grid patterned cities are spoken about in terms of “blocks”.

¹⁸ Le Corbusier, *Vers une architecture*, Hungarian translation: *Új építészet felé*, Corvina, Budapest, 1981, p. 11.

¹⁹ Windows usually do not open; they are indistinguishable from the enclosing walls equally made of glass and having the same appearance. Elevators are windowless; buzzing air-conditioners, elaborated switchboards starting the gadgets of the bathroom ranging from hair dryer to Jacuzzi bath are just a few components of the functional kit.

realm²⁰ emerges from the planning offices of professional designers who still claim to hold the solution to every building problem in the name of scientific and technological progress. The studio with urban planners pushing around tiny toy-houses on their models has become an all too familiar sight. Nonetheless, what these people play with are homes, institution headquarters, factories, whole settlements.

Seen from our point of view, one century later, the mutation seized by Sitte appears to be announcing the progressive reification of architecture. Nineteenth century elitist aestheticism has meanwhile turned into the less idealist but far more dominating aestheticism of the industrially designed *object*. Parallel to the reversibility of the process leading from the project to the building, arranged space is progressively losing its multifold anthropological character to become an admirable aesthetic thing.

From being a preliminary projection of architecture, two-dimensional representation achieves a self-sufficient status: superstructures are erected at exorbitant cost to end up as photo models for superb postcards. Such might have been the goal of the architect of the *Très Grande Bibliothèque* in Paris, Dominique Perrault, in spite of his declared purposes.²¹ This

²⁰ With respect to the post-industrial evolution of human settlements see Melvin Webber, "Urban Place and the Nonplace Urban Realm", in *Explorations into Urban Structure*, University of Pennsylvania Press, Philadelphia, 1964. See also the Sierra Club report: *The Dark Side of the American Dream – The Costs and Consequences of Suburban Sprawl*, Washington DC, August 1998.

²¹ "This building is not to be described by a photograph. There are several prolongations, several readings to it..", D. Perrault, *Connaissance des arts*, hors série No. 99, cf. Jean-Marc Mandosio, *L'effondrement de la Très Grande Bibliothèque Nationale de France*, Éditions de l'Encyclopédie des nuisances, Paris, 1999, p. 53 (my translation).

recent piece of the *grands travaux* initiated by the late president Mitterrand – whose truly extravagant building ambitions would be worth a comparative analysis – illustrates well this evolution in contemporary architecture. The original idea was already committed to technological prodigy: the new library was to be entirely computerised. From its inauguration, the electronic systems have never worked properly and, at the present level of specific technology, they cannot function on an acceptable level.²² The same goes for the “hyper-sophisticated” technological procedures meant to protect the library from disaster. Besides being ineffective, the system itself can become the source for accidents.²³ As for the building that resulted from this simplistic, anti-contextual “technomania”, it has in vain attempted to embody symbolic levels of perception. These were either abandoned on the way, like the transparent *showcase* towers that had to be obturated with wood panelling to protect the books from direct sun radiation,²⁴ or they were condemned to failure like the inaccessible garden of the courtyard (you can only see it, you cannot *walk* in it). The trees can barely survive in their concrete basin while birds crash themselves against the windows trying to find shelter in the mirrored image mistaken for true foliage.²⁵ Moreover, the architect has been granted that not even a poster hung by the employees on the walls of their working places would alter the overall aesthetic unity and coherence of his oeuvre.²⁶

²² Jean-Marc Mandosio, *L'effondrement de la Très Grande Bibliothèque Nationale de France*, Chapter III, pp. 65 sq.

²³ *Ibid.*, pp. 47-49.

²⁴ The towers were soon to be called “solar ovens” [*“fours solaires”*]. The glass walls had to be doubled thus making the presence of glass useless. *Ibid.*, p. 46.

²⁵ *Ibid.*, p. 50.

²⁶ The “artistic integrity” of Perrault’s work is guaranteed by contract, cf. *ibid.* p. 59.

So, on the one hand, our buildings are progressively turned into industrial design products for consumers. There are numerous reasons why they seem to have more in common with the dishwasher than with the primitive hut. On the other hand, corollary to our decreasingly acknowledgeable presence within them, buildings become highly aesthetic entities, made to be looked at, photographed, mediated as two-dimensional representation.

We have enough reason to talk about a new hegemony of the image and of the dominance of visual perception. This functional asymmetry is up to a point naturally justified by the importance for human perception of sight before all the other senses. However, it is only in combination with our tactile, olfactory, and auditory impressions that a synthetic perception of space can be achieved.²⁷ Only the secondary aestheticism of our epoch, offspring of the avant-garde, combined with our unprecedented means to produce, store and multiply images that has pushed visibility out of any proportion with any other means of perception.

Thus, corporeality as reified reality is itself reducible to the “antiseptic” two dimensions experienced through our two-eyed vision. To recover full corporeality – the vanishing third dimension – is a task yet to be identified by post-industrial urban arrangements.

If we choose to consider architectural and urban history without applying the usual scholarly time divisions – to the point of ignoring the major shift in urban planning that was

²⁷ For a detailed analysis of the psycho-physiological aspects of visual perception, see Edward T. Hall, *The Hidden Dimension*, Hungarian translation: *Rejtett dimenziók*, Gondolat, Budapest, 1980, mainly pp. 104 sq.

brought over by industrial revolution, we cannot fail to notice the continuous increasing of the scale of the intervention on our environment. The view becomes more and more comprehensive. Structures embrace larger and larger areas at a territorial level. Of course, while the scale of the planning grows bigger, the scale of the representation cannot but shrink – details are disappearing. One way to restore some sense of immediacy in our intercourse with built space should be, as is shown by Choay,²⁸ the recovering of the – irreplaceable – local scale arrangements neglected by territorial planning. Moreover, “human scale space [...] represents our most valuable heritage as [...] it is the most jeopardised...”²⁹ Industrial design would not do to respond this goal; personalised, detailed planning is indispensable to re-humanise our immediate surroundings.

Thus, two-dimensional representation of architecture turns out to be misleading. What goes currently unnoticed is its secondary quality as representation, similar to the reproduction of a work of art. For beyond its functional and aesthetic purposes, it is architecture itself that – artistically speaking – *represents*. Architecture as an art is certainly neither a hollow sculpture nor a combination of painted surfaces. Its realm of expression is elsewhere, addressing our senses and intellect. Architectural experience *must* be an immediately corporeal one. Therefore, any iconic rendering of architecture, as representation of a representation, is either a mere substitute or a work of art belonging to another genre.

²⁸ Françoise Choay, “Patrimoine urbain et cyberspace”, *op. cit.*, p. 99.

²⁹ *Ibid.*, p. 100 (my translation).

What does then architecture represent? The question has been addressed in many ways³⁰ and is bound to remain an open one. One cannot disagree with Dalibor Veselý when he says that “there is no clear notion as to what architecture should represent” and that “architectural experience is not generated in the context of buildings as *objects*, but is always situational”.³¹ At this point, I would rather indicate something architecture cannot represent without disintegrating into oligo-dimensionality. Architecture does *not* represent *itself* the way an artwork does. A painting or sculpture is self-sufficient in its physical being. Such a potential art object would wait indefinitely for a spectator to be made active at any moment.³² Architecture, regardless to its epoch, style, or materials must initially represent the *absence* of its inhabitants, be they of human or divine nature, or else it is reduced to an object referentially closed upon itself. Non-art. The presence of the inhabitant – consisting in the completion through his or her creative perception and use of the arranged space – is indispensable for an architectural meaning to emerge.

³⁰ For instance, the anthropological and historical approach of Joseph Rykwert, *On Adam's House in Paradise*, The MIT Press, Cambridge, Massachusetts, and London, England, second edition, (1981) 1989, *The Idea of a Town*, The MIT Press, Cambridge, Massachusetts, and London, England, 1988, *The Dancing Column*, The MIT Press, Cambridge, Massachusetts, and London, England, 1998. The semiotic approach is also remarkable, such as Geoffrey Broadbent's in “A Plain Man's Guide to a Theory of Signs in Architecture” *Architectural Design*, 7-8, 1977, or *Signs, Symbols and Architecture*, Chichester, John Wiley & Sons, 1980.

³¹ Dalibor Veselý, “Architecture and the Poetics of Representation”, p. 24 (my italics). See also “Architecture and the Conflict of Representation”, *AA Files*, No 8, 1985 (my italics).

³² Cesare Brandi, *Teoria del restauro*, Romanian translation: *Teoria restaurării*, Meridiane, București, 1996, mainly Chapter 3, concerning the manifestation of time in relation to the work of art.

REZUMAT

Ideea apare în critica lui Sitte vizând spațiile urbane moderne concepute pe planșetă; începutul sfârșitului pentru el: urbanismul baroc. Miezul gâlcevii: insula înconjurată de căi de circulație care iau locul străzilor mărginite de case. De fapt, proiectul de arhitectură există dintotdeauna. Schimbarea de esență de care vorbește Sitte ține nu de cele două dimensiuni ale reprezentării tehnice, ci de reificarea spațiului construit. Procesul de translare de la proiect la amenajare devine reversibil. Se poate vorbi astfel de o nouă venire la putere a imaginii și de o hegemonie a vizualului.

Evoluțiile recente (ultimii cincizeci de ani), au văzut proliferarea spațiilor quasi-urbane de-a lungul șoselelor în toate societățile post-industriale, nu doar în America (+ *plug-in city* etc.). Trecerea în revistă a trăsăturilor spațiilor amenajate la scara teritoriului revelează continuarea aceleiași schimbări de esență observată de Sitte.

Cyberspațiul apare ca o reducere târzie, deși poate nu ultimă, la bidimensionalitate: spațiul virtual, simularea spațială, reconstituirile virtuale de spații arhitecturale și urbane creează o meta-realitate confundată mai mereu cu cea corporală.

Corporalitatea ca realitate reificată este „reductibilă” și ea la două dimensiuni (rămâne de demonstrat?). Restituirea unei corporalități depline este așadar un deziderat care mai trebuie asumată de către amenajarea urbană post-industrială.