

The Forms from Above

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Drawing and form, an ancient premise

Drawing is form, and this form is always a new creation, a new represented world, a first step toward an abstract geometry. A description of the sky dome, a view from above of a site interpreted in its broad outlines, so that geometry can speak the language of intelligible forms and their relationships. From the earliest days, 'drawing' creeps into the representation of the world by flanking artistic interpretation with geometry and abstraction. It is already an architectural drawing from the very beginning. At Lascaux, in the prehistoric cave, a square figure makes its appearance, and it is clearly a planimetric hypothesis. It is a geometry without plasticity, rendered two-dimensional as in a zenith view: geometry appears not as a theory of the figure, as a technique of representation,

but as 'an abstraction' of a 'view from above', as a projective diagram. Along with the animals, then, a pair of grids, of checkerboards, are etched together in two distinct squares with colored fields in ochre and vermilion. A first substantive distinction, between Nature and artifice, separating and defining drawing as 'art' and geometry as conceptual interpretation and representation. Mental figure, 'not real'. This is drawing, tool and form at the same time.

According to some linguists, the transition to speech (and writing) comes 'from the sign', the symbolic graphing of the diagram that becomes, at a later stage, phonetic expression. The 'sign' comes before the 'sound' of the word. Thus, then, Olzhas Suleimenov writing *From Sign*

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Fig. 1. Mark Pierce, Map of Laxton, 1635. The structure of the fields is finely depicted. This is a true survey of the formal behavior of agricultural land, meticulously cared for from the point of view of representation and the formal message that is reproduced. It is a rare example that expresses what we are able to take in today from the satellite and are hardly able to recognize from a formal point of view.



to *Sound* [Suleimenov 2015], conceptually reverses the birth of language by making the symbolic representation of the world as the source of spoken language become preponderant in the cultural development of primitive civilizations.

I am also thinking of an exceptional film, *The cave of forgotten dreams* built on the early footage inside the Chauvet cave made by Werner Herzog (with three-dimensional cameras that enhance the spatiality of the depictions on the rock surfaces) revealing the inherent kinematicity in those thirty-thousand-year-old rock figures. In this film we discover the 'spatial function' of the early paintings and understand how the drawings were in a plastic relationship with the movements of the rock and thus formed a volumetric system with the container, as if the cave were interpreted spatially.

For Roberto Calasso, "to hunt, one must draw," and "one day that lasted no less than twenty-five thousand years, Upper Paleolithic men began to draw. [...] The animal and the person who drew it belonged to the same continuum of forms. That was the moment when the pressure of the powers imposed the strictest aesthetic discipline: the line, to be effective, had to be right. [...] If the line was not right, the power was not evoked." Thus, "along with the animals had appeared geometry. Countless figures accompanied the animals or stood out isolated on the rocky walls. All kept their secret. But all were united by one character: to be the negation of the world as it manifested itself, as was the first wall perfectly perpendicular to the ground" [Calasso 2016, p. 28].

Moreover, the relationship between geometry, different from 'natural figures,' and the abstract, the 'becoming diagram' of form, also passed through a series of resonances between celestial figures and schematic imprints on the ground. Perhaps it was precisely in the rocks that the geometric nature of form was hidden, something that, like synopias, surfaced from time to time in the vision of things. Conceptual and creative vision, vision that was done together with drawing, sum abstraction of the naturally spatial thinking that belongs to man.

Much later, some not insignificant relations between form and figure are placed at the basis of art itself as a process of artistic discovery, we would even say as a process of 'formation', in the prodigious *Theory of Form and Figuration* that Paul Klee (1879-1940) collects in the two volumes of notes and reasoning produced during his teaching activity at the Bauhaus. Drawing, conceptually, takes flight since

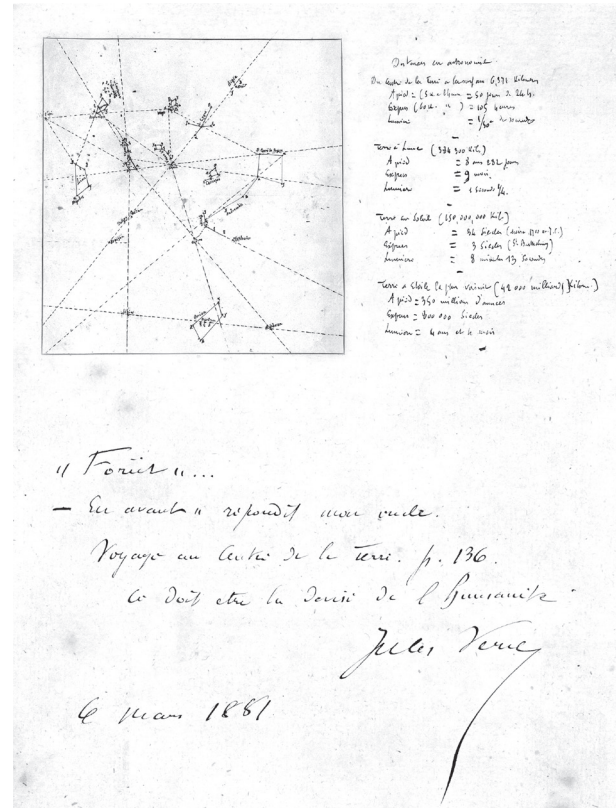
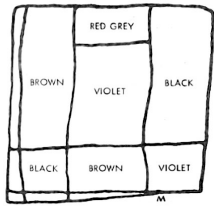


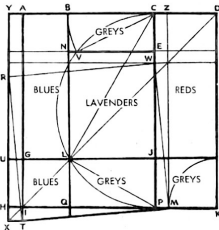
Fig. 2. Jules Verne, diagram, 1881. Contained in a manuscript of notes about the distances between certain celestial bodies. A useful relief to the imaginative narratives of a literature that relied on scientific knowledge. Relationship between constellations and writing, between geometry and narrative, between map and form.



A 15,000-YEAR-OLD
CAVE PAINTING AT LASCAUX
From "Prehistoric Europe"
by Philip Van Doren Stern
Norton, 1969

A MODERN PAINTING:
"DIVISION OF A SQUARE BY
CONIC RECTANGLES"

ABXAI is a Parabola to NEXNL
as an Ellipse and a Hyperbole
to CDXCJ as a Parabola



- 1.00000 AD, AI, (AB+CD) × (BD+1)
- .24512 AB, ZD, GI, CH, MX, JP, FK
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- .24512 NE+NL
- .24512 CDXCJ
- .24512 YB+YU, AD+CM, GP+GI
- .24512 LP?
- .24512 VC+JPS
- .32472 CD, UL, UX, JP, YB, YR
- .32472 NL?, (CD/AB)-1, (BC/CD)-1
- .43016 BC, VC, NE, LJ
- .43016 (AB+CD) × BD
- .43016 I-(AB+CD)
- .43016 AB+BN, AB/CD, CD/BC
- .75488 BD, BL, IM, AZ, NP, WP
- .75488 (1/AB+CD)-1
- .18504 BN, CE, AB+AG, UJ+UH
- .18504 VC?, BC?, NE?
- .18504 (BC+BN) × (LJ+LQ)
- .18504 I-(AB+CD+GI)
- .10544 L+LQ
- .10544 YB?, CD?, UL+UX
- .07960 BC+BN
- .07960 YA+YH
- .07960 YA, PM, IT
- 1.07960 YD, YX, AT
- .06008 SW
- .06008 AB?, GL+GI, JP?, MK+FK
- .35056 NE+NO, CD+LP?
- .35056 YB+YX



Fig. 3. Lascaux Cave, 15000 B.C. Survey of the square represented at the animal's feet with geometric considerations by artist C. Johnson. Opposite image of the cave figures [Venezia 2009] Image reprocessed by the editors of the book.

it belongs –for Klee– to the metamorphic field of form, the absolute science of creation. Everything is *in fieri*, it is a matter of studying its formal behavior, and Klee is perhaps the first to build a scientific theory on it. A fundamental assumption is that if science is progressive, art is conservative. We can investigate the past as well as the future with the same creative energy and essential beliefs, in an 'eternal present' that guards each new experience. Thus, Le Corbusier (1897-1965), in *Vers une Architecture* discerns that: "there is no primitive man; there are only primitive means. The idea is constant, virtual from the very beginning" [Le Corbusier 1923, p. 53]. Returning to the square, another famous example, at least as famous as the *ante litteram* representation of Lascaux, succeeds in bringing together two fundamental concepts encapsulated by geometric drawing, whose epistemological properties come before the rules of construction, since they are essentially encapsulated in the idea that drawing is a 'tool and diagram' that filters knowledge in order to interpret reality. This is the Egyptian grid, the "*mise aux carreaux*," which –according

to Sigfried Giedion– is not comparable to the painter's perspective diaphragm or the scheme underlying the painting [Giedion 1969, p. 501], nor as Leon Battista Alberti (1404-1472) wanted, to the "optical veil," but was a system of "compositional proportioning". Through this, scientificity was given to the act of harmonizing through number, the control core (the cubit and the closed palm), the square matrix with which to arrange and measure, interpret and control, composing space. It was the *modulor* of the Egyptians. Interpretation and formation.

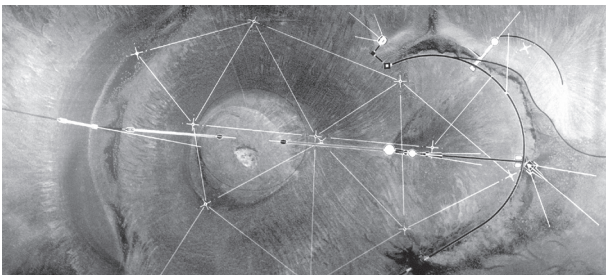
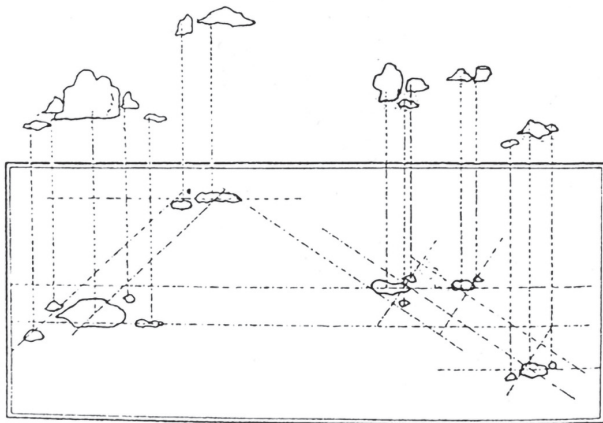
We have, then, several thousand years of 'drawing'. Drawings were placed in epistemological relation to each other: a map seen from above and a celestial triangulation, the figural relationship of a settlement pattern to its context, the decoration of a menhir. The small and the large interacted in a general view of the world that was essentially described through the language of geometry. Drawing was the tool, indeed, we would say, the 'primary language' of culture. We would say more: representation was not a form of restitution of reality or of thought, of

Fig. 4. Werner Herzog, Image from the movie *The cave of forgotten dreams*, 2010. The forms move in tune with the surfaces. The movement of the torch light contributes to the dynamism of the figures. The figures belong to a plastic narrative, almost as if it were a film sequence: they are in fact repeated in series and overlapped as if moving, as if walking.



Fig. 5. Ryoanji, scheme from 1800. Graphic interpretation of the Ryoanji garden in Kyoto, where an elevation is developed from the plan that does not correspond to the normal section or elevation of the set of rocks, but rather, being shown with different heights, the rocks themselves build a conceptual diagram made up of heights and positions. Almost as if it were a sound, musical pattern.

Fig. 6. James Turrell, Roden Crater, drawing. Complex planimetry of the site geography project. It is presented as an abstract diagram made up of alignments, visual goals, triangulations, arbitrary axialities, and geometric construction that enshrines the meanings of place.



knowledge, but all in all, it was directly a form of thought, 'bildung,' literally 'formation,' in the pedagogical sense, i.e., forming form. Yet, also representation of the world. It was imagination and poetry, survey and observation.

We cannot say that Aruspic rites did not have their own discipline of representing the Stefano Zecchi, an Italian Philosopher, in the introduction to the volume *The Metamorphosis of Plants* by Johann Wolfgang von Goethe (1749-1832), points out, precisely, the particular characteristic of the term 'forming' in the German language, certainly, to be understood in its educational meaning, of 'forming oneself,' but also as reinforcing the very idea that in the form is inherent the very process of formation, of "becoming of the form" –says Zecchi– that "is the force of metamorphosis" [Zecchi 1983, p. 17].

Every design must have, then, its own self-formative process, contain its own construction, 'bildung,' the key to its self-generation.

Again, we return to Klee, who demonstrated exactly this intimate generation of form as a specific assumption and testable theory. Through Art, through the science contained in drawings and words. Formal questioning, the study of beauty passing through the intelligible and the visionary.

The imaginary point of view

The interpretation of the landscape in its components has been superimposed, since Neolithic times, on a definition of the forms involved and a description of the territory in formal terms. To figures and natural masses, rocks, tree patches, clefts and exceptional plastic presences, new forms could be added that interacted with places and conformed built systems, even on a large scale. Symbol and sign participated in a single geometric vision. Incredible examples of real maps drawn on a territorial scale, authentic landscape designs, can be found as far back as the fifth to sixth millennia B.C., in a variety of places in Europe and Asia.

They are spatially extended architectures that bring into play two main viewpoints, the heart of a millennial spatiality: the 'horizontal of vision', which aims to define perspective goals, the presences at stake, and the 'viewpoint from above', which includes the verticality of vision in space. The latter performs a symbolic task, related to the relationship with the vertical of the sky, the relationship

(sometimes even calculated) with the vault of heaven and its ideal alignments. Let us not forget that geometry makes its appearance in human cultures precisely as a useful system for tracing earthly relationships and calendars, drawing both on the ground and in the sky. Everything is enclosed, or a set of enclaves; the landscape can become architecture through the interaction of geometries seen from above. Prodigious gazing that makes its entrance especially in Neolithic eras.

William Morris' definition in *Prospectus of architecture in civilization* then comes to mind, where, meaning by 'Architecture,' "the whole of the modifications and alterations wrought upon the surface of the earth, excepting the pure desert" [Morris 1881], this art seems precisely to merge its essence in its relation to the soil, as an extension of it, a physical interpretation of it. It encapsulates perhaps a topological richness. Rooting and extension have the earth as a base, as a support, and the movements define a precise strategy of place.

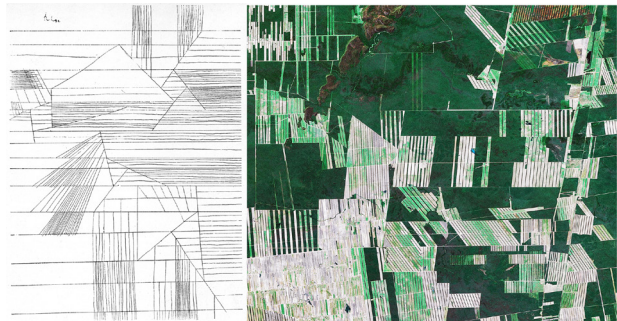
Two visions that are original and organic to the culture of construction throughout the ages. Horizontal and vertical. The structure of space that the two visions bring into play is fundamental. Not anthropocentric, but cosmological.

Spatial encroachments are defined in terms of perspective, horizontally: with the view from below, the essential function of architectural space is brought into play, which is to participate in a domain, in a perception of one's position in an interior, whatever it may be, made up of a system of relationships. From there, the plasticity of space and designing based on perspectives starts.

Triangulation references and topographic positioning are, on the other hand, controlled with the zenith point of view. But not only that, the projective map is already a plan, and it is present –always in the Neolithic period– exactly *as a project*. Indeed, we would say that in these unsurpassed experiences (as Leonardo Benevolo wants) the project and the diagram coincide in a single theoretical vision dropped *into geography* [Benevolo, Albrecht 2002]. Thus "architecture takes charge of (represents and reworks) the entire natural landscape, with a confidence no longer surpassed. [...] The willingness to make natural and artificial forms coexist, in even very elaborate arrangements: qualities that atrophy in later eras, when the field of architecture narrows into the limited spaces of urban enclosures" [Benevolo, Albrecht 2002, p. 42; see also Benevolo, Albrecht 1994].

Fig. 7. Fossa (AQ), Aterno Valley, image from a hilltop. The incredible Italian landscape holds shapes and figures that seem to construct a talking landscape. The hill in the center of the valley –as seen from above the village of Fossa– looks like the back of a giant dinosaur. It is a presence that plays with the whole territory, setting in motion a site and a cultural geography.

Fig. 8. Paul Klee, Huts, pen drawing, 1929. Alongside, Google Earth. Prodigious formal associations distant in time and space. Klee imagined from a bird's eye view and prefigured formal behaviors.



This is evidently an unusual point of view, an elevated vision that cannot be matched except in the views obtainable from high ground, in the visibilities towards the valley floor, and ultimately in an abstracting of vision, directly and necessarily projected onto the ground as from above. It is a conceptual shift that is repeated only much later with Land Art, with the reconquest of the fundamental tension of space within the landscape and its recovery of meaning in 'cosmological' terms, which takes over a cultural *vacuum* that has lasted too long. Recall, among all, James Turrell's (1943) *Roden Crater* or Michael Heizer's (1944) contemporary *màstaba* of the *City* founded in 1972 and completed in 2022. In the former, some drawings are superimposed on the orthophoto of the crater and continue its formal force in a graphic study for possible small topographical changes to be made. In the second example, Heizer defines one of the most important architectural spaces of the millennium by merging the idea of sculptural spatiality of a complex of abstract constructions with the symbolic function of the planimetric arrangement. In fact, he builds an ideal bridge between Mesoamerican complexes made of *màstaba*, truncated pyramids and stereometric masses (also cited and studied by Jørn Utzon), and the possibility of visiting his work with a virtual trip from a satellite.

Perhaps the first 'non-Neolithic' architect to take up the view from above in creative terms was Le Corbusier, who used his *carnets* to jot down the first, new (and at the same time very ancient) visions of the forms of the world flown over from an 'impossible' viewpoint. As new as it was natural, indeed inherent to the human imagination as well as the need for architectural vision.

A discourse apart is the boundless-but essential and simple-experience of viewing the earth seen from above, once the preserve of very few photographers and particular editorial circulations, and certainly of a discipline, that of Geography, which is for all intents and purposes concerned precisely with graphic renderings of the earth's crust and its eventual thematization. The formal bearing of such satellite visions, however, concerns a real discovery. Which brings us back once again to Paul Klee, the artist who was perhaps the first in the early twentieth century to introduce, outside of architecture, the bird's eye view as a technique of formal investigation of the geometric structures of both the earth's surface and the color fields of his paintings.

Certainly Lemuel Gulliver, who looked at things from above on a 12:1 scale, we might say, had been a forerunner of this, along with the Neolithic architects. But even more, to this day we are faced with the true and powerful aesthetic abstraction of the surface of our planet. We find ourselves easily going through the rounds of a zenithal, movable and editable view in the high-resolution mappings of satellites. Orthographic views even in real time. The change of perspective is decisive, but not so new, all things considered, because what we might call "the imaginary point of view" [Benevolo, Albrecht 2002] of architecture has always acted and been the conceptual basis of every project, every design.

The new view, we might say, of the Earth as seen from the Moon, that is, that view of our planet's surfaces probed by orbital distance, allows us to work as if in an infinitely historiated field of forms, and perhaps to realize how much the real sustainability at stake is the formal one. Poetry and the art inherent in it, first human action. Sustainability of form, of the whole, of the visible concatenation between things and correspondences of meaning. From above this is exactly what happens, the eye follows latent geometries, creates associations of fields, profiles and contours, builds formal structures that underlie, in essence redesigns the visible.

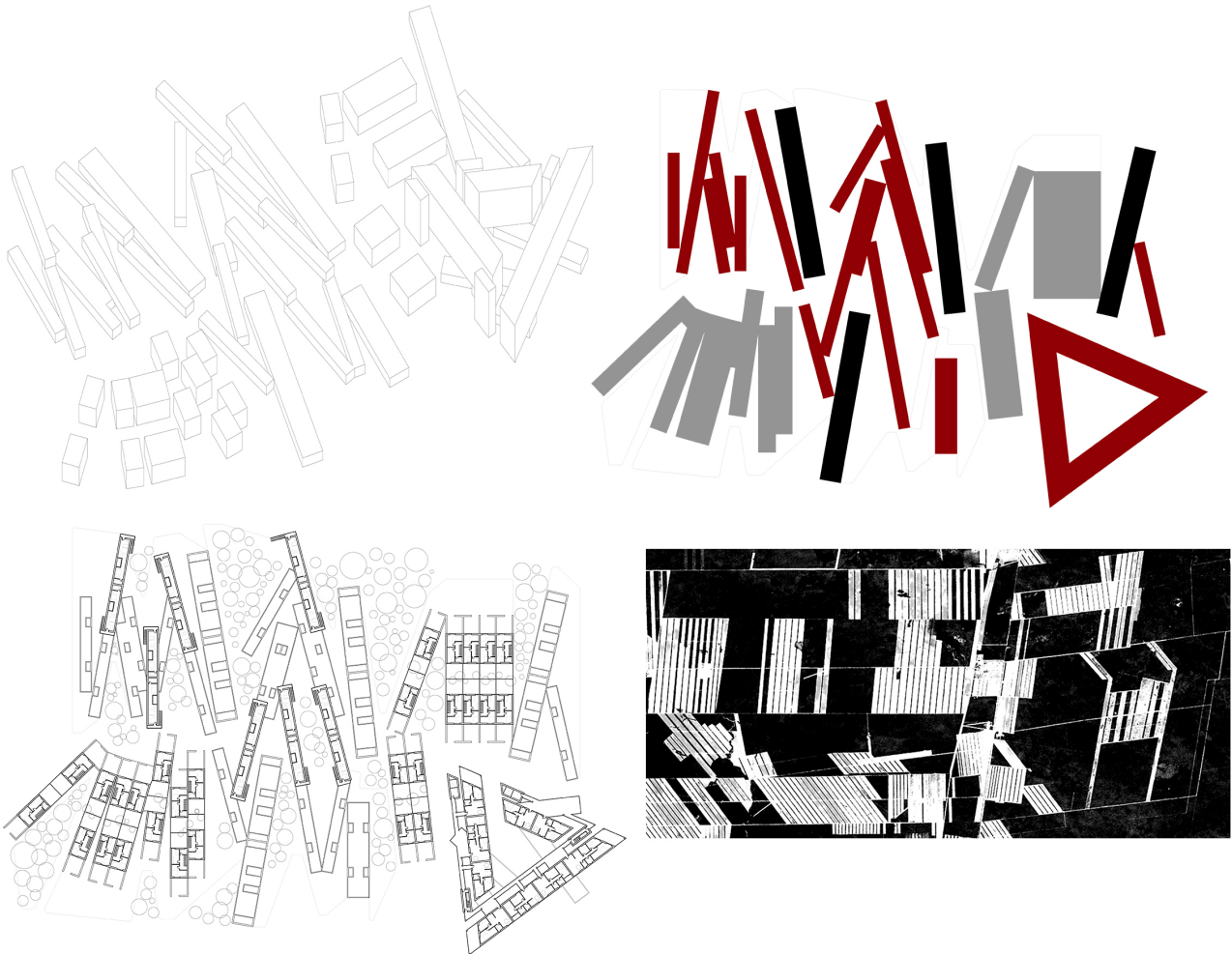
For Paul Valéry, it is a poetic operation that invests both language, composition, and architecture, where "the work of the eye on the object" is acted upon and where "architecture as art is the art of giving the gaze that of which to construct a system of figures and their mutual transformations with the movements of the eye" [Valéry 2011, p. 140].

The new prime landscape, paraphrasing the Italian poet Andrea Zanzotto [Zanzotto 2013, p. 32], then becomes the view from above, the plan diagram of reality. A new nascent dystopia, or a useful creative paradigm that allows us to still root our view to the cosmos?

No different, perhaps from the extraordinary photographs we can find of the surfaces of the planets of the Solar System, as published by NASA (*National Aeronautics and Space Administration*). Mars among them all [Barral, Girard 2017], where the images acquire an undisputed, transplanetary formal value. It makes no sense to think in terms of context, because the world of forms invests both astronomy and geography and small landscapes.

Let us resume with another assumption, with another identification or tautological reasoning. Drawing

Fig. 9. Design experiments. Corrado Di Domenico with Giada Altieri (second-year Architectural Composition course, DADI, Unicampania). Formal structures seek correspondences and assonances, interpret morphologies and provide what we believe is true sustainability, that of art.



is architecture, not only that: through drawing we operate the only linguistic operation that belongs to architecture. On the other hand, we could not think that through word and syntax, composition and sound, poetry is not generated, and only with them. Drawing is to architecture as speech is to poetry... the syntax of form and its accomplished and controlled expression.

Drawing, therefore, can neither be self-generated by computers, nor be subject to algorithmic laws (see the artificial intelligence chatbots raging as early as 2022-2023),

nor be perfect restitution of reality. In architecture, it cannot be the preserve of pure representation or expression of a style. Drawing is not only a tool but also an interpretive key, it is diagramming and at the same time a creative act. Analysis and synthesis.

Is it not itself, complex, abstract work and geometric diagram? It contains within itself the generation of form and the endless exercise of its geometric signification. Drawing cannot be restitution, but interpretation, that is, writing on, rewriting. Survey and, therefore translation.

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