

Drawing and Measuring to Define a Reason between Thought and Project

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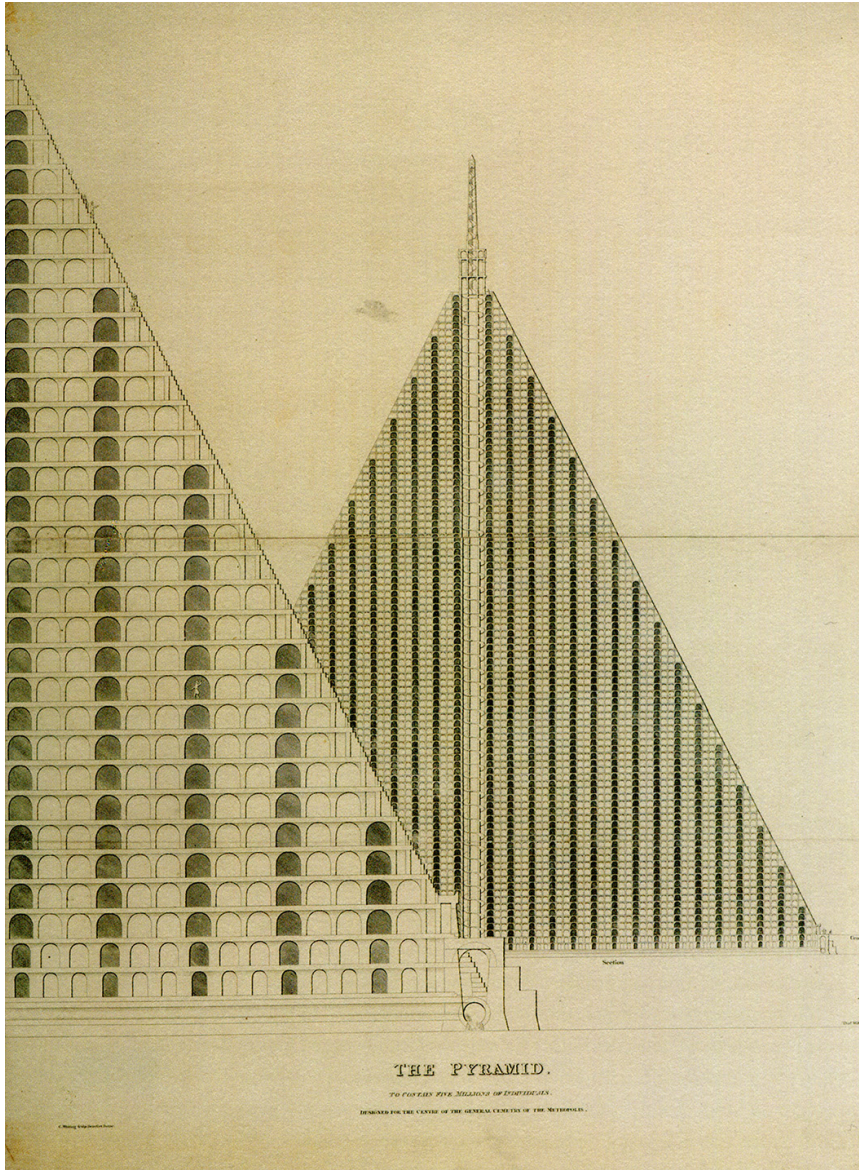
Treating the genetic relationship between Drawing and measurement, without wanting to commit the references, albeit rich in meaning, that bring us back to Phidias and Polycletus and their preference for mathematical rules and geometric order as the necessary basis for any artistic expression, or to the Plato himself and his obvious impossibility of separating the doctrine of numbers, measure and balance from the arts, up to the conception of Saint Augustine which takes up the maximum Solomonic “*Ordo, pondo et mensura*” in his conception of God, origin of the beauty that contains in itself number, measure and harmony [cf. Ungers 1994, pp. 307-318], and to all the de-

velopments that have originated from these assumptions inherent in harmonic-proportional theories, it means investigating a subtle condition of balance, a horizon that moves towards the territories of knowledge and explains the principles that aim to permute the design in the dimension of the restitutive and planning double prefiguration.

“The theme of architectural representation consists of a set of concepts that [...] correspond to the Greek concepts of *μίμησις* [mimesis], *μέτρησις* [métrēsis], and *ποίησις* [poiesis]. In a very schematic way: imitation as an analogical and perceptual correspondence between reality

This article was written upon invitation to frame the topic, not submitted to anonymous review, published under the editor-in-chief's responsibility.

Fig. 1. T. Willson, Pyramid cemetery, 1831 ca. [Wilkinson 2018, p. 83].



and its representation; the measure as a ratio and comparability; the poetic activity in the sense of production and design. And all this is organized and directed towards the project as a form of knowledge" [Ugo 2008, p. 1].

The object of the imitation-representation requires the definition of a model and a technical-operating system; model that will not be reduced to mere selection of the fundamental elements as parts of the work, but it must contain, in order to meet the needs of theoresis and knowledge, components relatable to the generality, universality and complexity of the phenomena and for this historically and critically recognizable [cf. Ugo 1992]. The model must possess seemingly contradictory qualities, since on one side it has to make explicit the particularity and uniqueness of a work, on the other hand it has to refer to a high degree of generality. "Forms themselves does not contain transcendent meanings or a priori. They are released from their previously 'given' condition. The meaning is in the relationship; architecture is among the signs" [Eisenman 1987, p. 19] [1].

The construction of models, in the broadest sense, is one of the key actions in processuality history and culture that man has been able to establish. One of the most significant stages has been to create a unit of measurement to be understood as a model to compare different elements one to the other. The first step is given by the ability to abstract, from any set, the quantitative elements, numbering and counting them; the next one is the possibility of comparing these quantities on the basis of a reference sample. Whatever the unit of reference chosen, measuring means considering reality only in its apparently passable aspects of an objective analysis. "The quantitative language with which science approaches a world stripped of its subjectivity qualities is a powerful tool for predicting, explaining and controlling phenomena. But in superimposing a world of numbers on the quality world of sensitive experience, a series of precautions must be used to respect the conditions that limit and regulate this overlap" [Popper 1972, pp. 361-363].

Therefore, the measure expresses a precautionary principle, a precautionary action that appears to circumscribe, at first, only the fields of the dichotomous quantity/quality relationship, committing, however, intrinsically and significantly, the aspects purely referable to the interpretative dimension of the world.

The theoretical object of the drawing is to be understood as "the analysis of the 'transfer' of a building from its mate-

rial dimension to its 'representation' and viceversa" [Purini 1992, p. 53], taking all the opportunities for deepening the knowledge and reflection that this continuous oscillation produces; the design thus takes on the role of an intermediary to trace the measure of diversity: in this way, a tiring and fascinating work horizon is outlined, which leads towards understanding the gap between an architectural program and an 'architectural thing', be it only designed or even constructed. Work as a transformation process that establishes an active relationship between man and reality, between man and nature [cf. Florio 2012, pp. 19-40].

Drawing becomes a differential device that is modulated on the ability to trigger a dialogue that challenges the quality of difference as a measure of the mystery to be revealed within it, which to match in tension the quality of our action, if relevant action and participates in the dialogue that manages to establish.

It must also be taken into account that quality cannot be considered as an absolute, historicized datum, a sort of linguistic category. "In our sensitive present we find it in the verses of the unknown of the canticle of songs, of Dante, of Eliot, of Ada Merini, we find it in the graffiti of Addaura, in the mosaics of Santa Apollinare in Classe, in the cretto of Burri in Gibellina. Quality exists in every inhabited place, the poet reveals it and makes it known to sensitive men. Faced with his duties, the architect, if he is educated to do it, reveals it with architecture" [Culotta 2006, p. 32].

In fact, in this world, things "have no power to exist in spite of everything, are simply subtle forces that develop their implications on condition that they gathered from favorable circumstances. However, if this is true, the identity of the thing in itself, the kind of personal stability, resting in itself, the fullness and the positivity that we recognized already go beyond the experience, they are already an interpretation of the second experience" [Merleau-Ponty 2003, p. 178].

An in-depth reflection concerning the act of drawing reveals its foundation as a complex operation of transposition of the different realities designed to make visually present what doesn't materially exist [2], and significantly insists on the persistent transcriptive action with which the necessary hermeneuse of cognitive aspects in order to oversee the continuous steps between the pre-figured and its replacement.

The elaborative parable that presides over the sign rewriting process within the architectural design finds a fruitful

Fig. 2. E. Horter, *Crysler skyscraper under construction*, 1933 [Tagliasco 1993, p. 25].



field in the synaptic junction that is established between the figurative gestation of the expressive models of the form and the architecture itself.

If it is true that the design derives its value and its quality by the intrinsic critical moment potential of synthesis and, therefore, communication and explication of the proximity ideational, it is true that this role through originates from the strength of its membership in the whole process of building architecture in prefigurative terms. "The project is up to the architect as the character of a novel is up to the author: he constantly goes beyond it. It is necessary not to lose it. The design follows him. But the project is a character with many authors, and becomes intelligent only when he is hired like this, he is obsessive and impertinent otherwise. Drawing is desire of intelligence" [Siza Vieira 1995, p. 51].

Of course, drawing cannot be considered as the equivalent or replaceable to architecture: it aims to clarify its theoretical structure, allows careful reflection on the architecture of history and memory, but also expertly measures the levels of desire and invention. "The drawings, preserving the architectural thoughts intact, give the possibility to save much of what would otherwise be lost in the architectural consumerism [...] Creativity is manifested in its purest form; the visions, not debased by compromises, unfold more freely [...] Architectural drawings become [...] as precise as convincing professions of cultural faith [...] an intellectual contribution to architecture" [Magnago Lampugnani 1982, p. 6].

Much more frequently, in the context of the representative elaborations referable to architecture, one feels pervaded by the configurative energy released by the architect's ideational translation translated into a succession of representations in which cryptographic syntax and autograph signs run quickly to decree one of the possible final configurations, the one that has seen its genetic process deeply and positively conditioned, not only by the static, technological and economic choices, but also by the intrinsic qualities and the creative incisiveness of the processing procedures and their semantic value. "Whoever draws at the moment of the delineation of a form immediately realizes how many it excludes, and how more and more numerous are the forms that will not come to light in the process of his work. The practical and visible reflection of this process can be seen in the so-called 'repentances'" [Pierantoni 1999, p. 128]. 'Repentance' which implies in its ethical meaning the reversal of the desire to extract

a good form from chaos, in the indecision between different forms. "In drawing you stop going around the image: you stop at one point. And you contemplate" [Pierantoni 1999, p. 128]. Fortunately, what remains are the furrows traced by the sequences of the story, its uncertainties and difficult convictions, the ideational storytelling, the cultural references, the construction of hierarchies and, finally, the decision made.

The representation wants to be read, therefore, in its gnosological function with respect to the intellect [cf. Contessi 1985, pp. 143-180], which first builds an articulated series of diaphragms, slowly, and then causes their demolition by means of incisions full of meaning which, once the codes have been decrypted, codes of initiations belonging to a graphic hermeticism that first hides and separates [3], push towards dispending horizons of new territories for measuring imagination, cognitive interpretation and ideational refiguration.

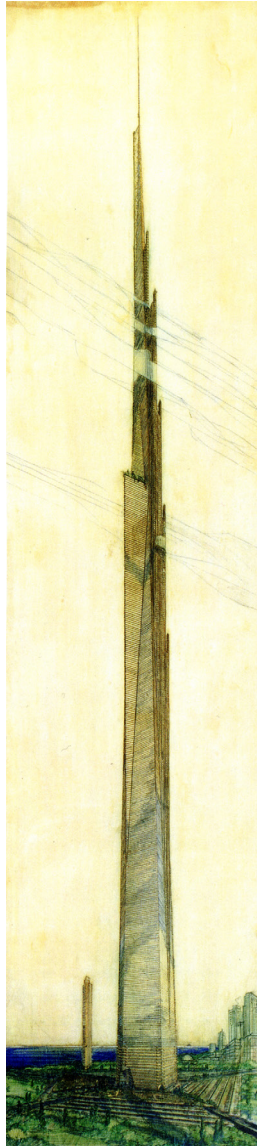
Drawing, in its quality of 'figurative writing', denounces its point of origin, identifies a direction, marks a trace that guides the author's subsequent intentions at every moment. These directions, each time reworked on the new proposals, define the general trend, and the limits imposed on them determine the extent and intensity of the will. "And the drawing, 'common casing at points of equal function' keeps the evolutionary track of this desire, which will receive an extension fixed in accordance with the origin, the path and the arrival of her own. The highlight of the highlights of the route will culminate in the expression, and will stress, by virtue of their position and importance, the intensity of thought" [Magnago Lampugnani 1982, p. 6].

Its essential peculiarity of 'through' cannot possibly be separated by the force of his presence in the whole process that is established both in the operation of investigation of the constructed reality, and in that relative to the figuration of an architecture and, therefore, in the long path of its configurative definition.

With drawing and through drawing we are driven into the double condition of measuring the mystery of the structure of things and being able to glimpse all the different projections.

The fruitful process that incorporates the existing connections between the results of exploratory and restorative investigations and the programs of the project hypotheses is densified, in the clear awareness that "there is no judgment of analysis that does not determine in the architect [...] a mental propensity towards a certain

Fig. 3. F. Lloyd Wright, Mile High skyscraper, 1956 [Brooks Pfeiffer 2015, p. 82].



design hypothesis" [Quaroni 1997, p. 43], establishing the "subjective time of the 'analyst'" [Purini 1992, p. 60] which, assuming the equivalence between the action of measuring and the deployment of the concept of measurement itself, perimeters with its interpretative tension fertile multiplicity of fields of investigation and project intervention. As a system of signs, of form and function together, aimed at defining an architectural form-configuration, in substance of another system of signs, it is to be understood, rather than as language, as metalanguage: "paradoxically, the only character who does not speak the architectural language directly is the architect himself, because he actually expresses himself only on paper in a metalanguage composed of signs that merely symbolize (and even very partially) the architectural facts without building architecture they themselves" [Maldonado 1974, p. 122] [4]. In this sense it refers to a transitory coding code which can therefore be continuously expanded and transformed throughout the process of defining thought [5].

In this regard and on the relationships between the process established by the drawing and the difficulty of its expressiveness, in the relationship established with the project, as a recognizable language as well as the literary and poetic one, what Vittorio Gregotti wrote is very interesting: "Drawing is not for us architects, an autonomous language: it is a question of taking measures, of fixing internal hierarchies of the site that is observed, of the desires it generates, of the tensions it induces; it is about learning to see the questions, to make them transparent and penetrable by the project. In the end it is a matter of seeking, by the means of writing of drawing, a series of resonances which progressively function as parts of a whole, which maintain the identity of the reasons for their origin, but at the same time organize themselves in sequences, paths, stops calculated, which align themselves for discrete differences towards a process of necessary diversity that is not ostentatious, a dense grammar of spaces and forms of the specific project and its use" [Gregotti 2014, p. 22].

The measure also and necessarily imposes multiple diversification 'scales' with which the relationship between man and the world, between the body of man and the nature-universe is continuously re-established. A series of 'restless' measurement operations that continually recalculates the relationships between the physical environment and the human body in the sense of the ideal body, which becomes a prolonged body thanks to the progressive intermediation with which our cultural experience provides us,

producing a different perception of the world to promote the architecture modification action. "It is a matter of measuring internal differences in the landscape, [...] measuring the state of affection in visiting its parts, measuring places and their possibility of offering themselves to a strategy of change, measuring positions, distances, font sizes and compliance of the new elements to be introduced" [Gregotti 2000, pp. 118, 119].

An action that often in recent years has entrenched itself behind it and media experience, preventing us from going through the deep layers of our cognitive awareness and decreasing our listening and interrogation skills. All this in architecture is reflected also in the fields of measurement, as frequently happens in the appeal to exaggerate the effects 'out of scale': "the obsessive repetition of the language [...] the new weird as unnecessary, to language as caricature [...] the imagination conceived as a regression of the imagination (the Grand Canal in Venice in Las Vegas); to a language, that is, touselled by the wind of air conditioning rather than the Benjaminian wind of the angel of history. [...] A long, tiring path of crossing awaits us, beyond which we can find the resistance of things and with them the possibility of measured movements" [Gregotti 2000, p. 120].

It becomes almost inevitable, in synthetically tracing the relationship between drawing and measurement as we have done so far, to mention the notion of order; trying to free it from the historical heritage of the Vitruvian genera [cf. Proccaccini 2018, pp. 107-127] to re-read it in the current light of a deep system within the architecture in which *eurythmia* and *symmetry* converge, the latter in the sense of commisuration (*sun* = with and *metron* = measure) [cf. Florio 2018, pp. 237-293], well aware that in the idea of architectural order the one of measure, "of repetition, of succession, has always been established of rhythm, of 'composition'" [Quaroni 1997, p. 172].

Notes

[1] The concept of "proportional movement" described by Nicola Emery appears very interesting and pertinent to the essential meaning of the relationship between the parts [Emery 2007, pp. 209-214].

[2] We are talking about what Vittorio Ugo indicates as the "Mediated (deferred) Experience" [Ugo 1991, p. 57].

[3] "Writing has served, often and for a long time, to mask what was entrusted to her: she did not join men at all, but separated them, opposing those who knew how to encrypt and decipher those who were unable

As Gregotti states again [cf. Gregotti 1994], the word order is an old-fashioned word, it refers us to restoration and to an imposing level of rules that leads to submission to forms of rationality that appear simplified today. But the architecture has the unavoidable task of reading the order in its historical sense and to propose a new order assumptions against the reification of chaos around us, in the belief that "the order is [...] as [...] it concerns a project, the law of constitution of the thing, the selection and organization of the elements that constitute it, but also the new system of meanings that it proposes and through which it is possible to look, that is to order the world in a new way" [Gregotti 1994, pp. 52, 53].

The order is "a level of creative consciousness that forever becomes the highest level [...]. The order supports integration. From what the space wants to be the unknown can be revealed to the architect. From the order he will derive the creative force and the power of self-criticism to give shape to this unknown. Beauty will evolve" [Kahn 1955, p. 59].

Sometimes some architectures are sufficient to return new and valid meaning to the whole which they belong, in the awareness of being an active part of a particular context in which an order must be reconstructed. This possibility often occurs by resorting to measured actions of design grafts that perform an action that we could define as a counterfire with which the margins of containment of the urban dissolution are drawn against which elements of regeneration are inserted: "this technique risky, it requires a wise effort typical of artisan knowledge, an absolute attention to detail, which allows it to stop the progress of the building, not for quantity but for quality. Preliminary to the counterfire of architecture is a scrupulous relief of the existing" [Sciascia 2014, p. 35], followed by an equally scrupulous restitution of the reality investigated, in a field in which the dialectic drawing/design becomes a necessary expression of hermeneutic experience.

to" [Barthes, Mauriés 1981, p. 606]. See also: Bolzoni 1995 pp. 87-134.

[4] "We proposed to consider drawing, so to speak of art and architecture created as artistic languages [...] and architectural drawing as a metalanguage, that is, a language above and at the service of another language: the architecture in flesh and bones" [De Fusco 1968, p. 136].

[5] As regards the relationship between drawing and coding and classifying system, in the express meaning of a flexible, expandable and transformable relationship [cf. Baculo Giusti 1992].

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Reference List

- Baculo Giusti, A. (1992). *Napoli in Assonometria*. Napoli: Electa Napoli.
- Barthes, R., Mauriés, P. (1981). Scrittura. In *Enciclopedia*, vol. II, p. 606. Torino: Einaudi.
- Bolzoni, L. (1995). *La stanza della memoria. Modelli letterari e iconografici nell'età della stampa*. Torino: Einaudi.
- Brooks Pfeiffer, B. (2015). *Frank Lloyd Wright 1867-1959. Costruire per la democrazia*. Köln: Taschen GmbH.
- Contessi, G. (1985). *Architetti-pittori e Pittori-architetti. Da Giotto all'età contemporanea*. Bari: Edizioni Dedalo.
- Culotta, P. (2006). L'architettura pertinente delle stratificazioni. In Culotta, P., Florio, R., Sciascia, A. *Il Tempio-Duomo di Pozzuoli. Lettura e Progetto*, pp. 23-36. Roma: Officina Edizioni.
- De Fusco, R. (1968). *Il codice dell'architettura*. Napoli: Esi.
- Eisenman, P. (1987). Architettura e figura retorica. In *EIDOS*, anno I, n. 1, pp. 12-19.
- Emery, N. (2007). *L'architettura difficile. Filosofia del costruire*. Milano: Marinotti Edizioni.
- Florio, R. (2012). *Sul Disegno. Riflessioni sul disegno di architettura*. About Drawing. Reflections about architectural drawing. Roma: Officina Edizioni.
- Florio, R. (2018). *Origini evoluzioni e permanenze della classicità in architettura*. Seconda edizione. Roma: Officina Edizioni.
- Gregotti, V. (1994). *Le scarpe di Van Gogh. Modificazioni nell'architettura*. Torino: Einaudi.
- Gregotti, V. (2000). *Diciassette lettere sull'architettura*. Roma-Bari: Editori Laterza.
- Gregotti, V. (2014). *Il Disegno come strumento del progetto*. Milano: Marinotti Edizioni.
- Kahn, L. I. (1955). Order and Design. In *Perspecta. The Yale Architectural Journal*, n. III, pp. 46-63.
- Magnago Lampugnani, V. (1982). *La realtà dell'immagine. Disegni di architettura nel ventesimo secolo*. Stoccarda: Edizioni di Comunità.
- Maldonado, T. (1974). *Architettura come linguaggio*. Firenze.
- Merleau-Ponty, M. (2003). *Il visibile e l'invisibile*. Milano: Bompiani. [Prima ed. *Le visible et l'invisible*. Paris: Éditions Gallimard 1964].
- Pierantoni, P. (1999). *Forma fluens. Il movimento e la sua rappresentazione nella scienza, nell'arte e nella tecnica*. Torino: Bollati Boringhieri.
- Popper, K. R. (1972). *Congetture e confutazioni*. Bologna: Il Mulino. [Prima ed. *Conjectures and Refutations: The Growth of Scientific Knowledge*. London 1963].
- Procaccini, V. (2018). Gli ordini architettonici. In Florio, R. *Origini evoluzioni e permanenze della classicità in architettura*, pp. 107-127. Seconda edizione. Roma: Officina Edizioni.
- Purini, F. (1992). Il disegno e il rilievo. In AA.VV. *Nel Disegno*. Roma: Clear.
- Quaroni, L. (1997). *Progettare un edificio. Otto lezioni di architettura*. Milano: Mazzotta.
- Sciascia, A. (2014). La seconda natura e lo sforzo sapiente. In Sciascia, A. (a cura di). *Costruire la seconda natura. La città in estensione in Sicilia fra Isola delle Femmine e Partinico*. Roma: Gangemi Editore.
- Siza Vieira, Á. (1995). Si chiamò un architetto. In de Llano, P., Castanheira, C. (a cura di). *Álvaro Siza. Opere e progetti*. Milano: Electa.
- Tagliascio, V. (1993). Scienza grande & piccola. In *Sfera*, n. 32, pp. 18-35.
- Ugo, V. (1991). *I luoghi di Dedalo. Elementi teorici dell'architettura*. Bari: Edizioni Dedalo.
- Ugo, V. (1992). Mimesi. In *XY. Temi e Codici del disegno di architettura*. Roma: Officina Edizioni.
- Ugo, V. (2008). *Μίμησις mimēsis. Sulla critica della rappresentazione dell'architettura*. Santarcangelo di Romagna (RN): Maggioli Editore.
- Ungers, O. M. (1994). "Ordo, pondo et mensura": criteri architettonici del Rinascimento. In Millon, H., Magnago Lampugnani, V. (a cura di). *Rinascimento. Da Brunelleschi a Michelangelo. La rappresentazione dell'architettura*. Milano: Bompiani, pp. 307-318.
- Wilkinson, P. (2018). *Atlante delle architetture fantastiche. Utopie urbanistiche, edifici leggendari e città ideali: cosa sognavano di costruire i massimi architetti al mondo*. Milano: Rizzoli.