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Drawing and Project

Abstract
As a creative reasoning, design is turning into something different from what we are used to, in a new logic that leads it, in the first place, to ensure environmental balance. Drawing has also changed, to the point that its demise, if not its death, has been explicitly mentioned. Rather, it seems to us that, from a pure architectural communication tool, drawing should be brought back to the role of a privileged instrument of design reflection, thus opening a season in which the project, also thanks to its digitization, the diffusion of BIM and the introduction of artificial intelligence, can be reconfigured as a simulation of construction work, if not as a form of punctual graphic deconstruction of architecture finally aimed at its construction.

Keywords
Drawing — Project — Architecture

Drawing and design constitute two, partly overlapping, sets.

Considerations on design

Designers know that the project is a creative reasoning, with its classical philosophical articulations in deductive or analytical on the one hand, inductive or synthetic on the other. Architecture in general and the project in particular are based on the reason and on the reasoning ability of the architect: a reasoning aimed at oneself and others. It is no coincidence that Stefan Zweig wrote about the "mystery" of artistic creation: «the greatest virtue of the human spirit consists in trying to make understandable to oneself what at first seems incomprehensible»[1]. However, the architectural project is turning into something very different from what we are used to. Contemporaneity obliges us to pose the question in a trans-scalar way, capable of working simultaneously at different scales, and above all with an approach that looks at that unitary whole – within which, in fact, our life takes place – deriving from the sum of the built environment and the non-built environment. Architecture is the creative product that, thanks to the project, emerges from the relationships between all of us, human beings as a whole, and the ecosystem in which we live. In short, a building – more than seen as an object, more or less successful, which is added to a territory or a city responding, more or less effectively, to a series of functions – is something that must guarantee environmental balance in the anthropocene, the era in which humanity began to affect the environment, in a sensitive and often negative way, but also one in which it feels – or at least should feel – a guest and not a master of the Earth: our common home. In very general philosophical terms, the project is valid as «the anticipation of pos-

sibilities: that is, any prediction, predisposition, plan, ordering, predetermination, etc., as well as the way of being or acting that belongs to those who resort to possibilities» (Abbagnano 1987, p. 701). The object of this anticipation is not necessarily something material, even if this is precisely what happens in architecture. In equally general terms, De Fusco (1984, p. 1) observes that «design in a broad sense is an activity that precedes (or should precede) every human action, both individual and above all collective». The foresight aspect inherent in the design activity is therefore as fundamental as it is firmly rooted in history. «In 1615 Vincenzo Scamozzi in his *Idea of Universal Architecture* summed up the architect's ability to foresee in the concept of *praecognitio*, which literally means preliminary cognition, or to recognize in advance. [...] Scamozzi also bases his concept of *praecognitio* on the passage taken from Aristotle's Metaphysics ("*ars est universalium cognitio, experientia vero singularium*"), where with this statement, according to the interpretation of Leon Battista Alberti, he gives precedence to art and the speculative aspect. Therefore, architecture essentially consists of a speculative intellectual activity of a decidedly teleological character» (Oechslin 2004, pp. 62-63). Still Scamozzi specifies the relationship between idea, design and execution with surprising clarity. The building is defined as «a scientific habit that resides in the mind of the architect» and the project and its drawings are the means by which the architect communicates his «invention». In short, with the project, we try to foresee and build what does not yet exist: the future. But talking about the future is always imprudent: it is essential to reflect «before taking any step, in an attempt to anticipate the future, that is, as the great philosopher Emmanuel Lévinas warned, 'the absolutely Other', in all its impenetrability and unknowability» (Bauman 2018, p. 6).

Considerations on drawing

Let's start with a testimony by Franco Purini:

> It is almost impossible for today's students to imagine what a project's path was like when we used to draw by hand. The quality of the individual sign permeated every moment of the cognitive and creative work, giving it an originality and an identity directly proportional to that of the sign itself. [...] In my conception of architecture, drawing has always played a decisive role, configuring itself as the native place of the idea, a theoretical and imaginative space only within which the embryo of a composition can come to light. Drawing is the individual expression *par excellence*, the scope of an architectural writing that fully represents the author. (2012, p. 57)

It is still so? Will it still be like this? What is certain is that it is not possible to talk about design without talking about drawing, a field strictly similar to that of design, and equally important for our profession, which has always occupied a central position in the preparation, the professional practice and the research and communication activity of every architect. In addition to the creative aspects recalled by Purini, the main technical goal of drawing is to express, clearly and uniquely, by means of only two dimensions (those of the representation plane, it does not matter if physical or digital), the three-dimensionality of the architectural space. Not an easy goal, which involves a scientific process of "translation" from 3D to 2D in both directions. In fact, architectural drawing can be divided into two subsets: survey and project. The first *proceeds* from the existing, being characterized by a dynamic that moves from the reality of the building to the two dimensions of the sheet. The second *precedes* the construction of

architecture. It is marked by the intention to pre-figure for the purposes of production and is characterized by a dynamic that from the two-dimensionality of the paper (or of the screen) tends to the spatial organization of the work to be built. But, on closer inspection and beyond these distinctions, any definition of drawing implies a tension towards the project, from which not even the survey is exempt.
In 2014, David Ross Scheer's book *The Death of Drawing* was published, which takes stock of the subject. To whom can we attribute the responsibility for this? Naturally to the new, or second, digital revolution in general, and to the spread of BIM, Building Information Modeling, in particular. We do not know to what extent the hypothesis of the disappearance (or at least of the sunset) of drawing as an architectural design processing tool is realistic. It is easier to agree on the beginning of a new season, different from that of the even more recent past, and on the need to respond to changes with the re-foundation of our design habits. In short, we are at the end of a paradigm that has historically worked for at least five centuries and on the threshold of a new era: a second digital revolution, therefore, whose main challenge is to fill the gap, created by the first, between projects, more and more virtual, and unequivocally real construction, to recall the well-known dichotomy used by Maldonado.
What will become of drawing? Are we destined to loose it and loose the relationship between its own dexterity and that of construction processes? Will representation be replaced by simulation? All in all we hope not, aware of the fact that novelties are added to what precedes them without ever totally depriving them and that representation, in architecture, plays and will continue to play a central role. Gadamer writes about it:

> Representation remains [...] linked in an essential sense to the original that is presented in it. But it's more than just a copy of that. That the representation is an image, and not the original itself, does not mean anything negative, it is not a diminution of being, but rather indicates an autonomous reality. The relationship of the image with the original is therefore fundamentally different from that which occurs in the case of the copy. It is no longer a one-way relationship. That the image has its own reality means, for the original, that it presents itself precisely in its representation. In the image, the original presents itself. […] Every representation of this type is an ontological event, and enters to constitute the ontological state of the represented. In representation, this undergoes a growth in being, an increase in being. The content of the image is defined ontologically as an emanation of the original. (1983, pp. 174-175)

Will the sunset of the season in which drawing was considered a mere communication tool for architecture bring it back to a more concrete role as an instrument of design reflection? If we are then convinced that we are at the dawn of a new era for the construction industry, the latter will truly be able to produce a built and infrastructured, digitized, shared, sustainable environment faster, at lower costs and with fewer emissions, accessible, inclusive, efficient and intelligent in view of the gigantic dimensions assumed by the global construction market? In many parts of the world this is already the case. Perhaps «there is no point in crying over what has happened. Individual architects can keep looking at their values if they choose so, but the discipline as a whole is already engaged in a radically different challenge. In architecture, the conditions determined by simulation, which appear sterile in the light of tradition, can offer new possibilities when viewed with different eyes. To continue to be architects, we have to change our ideas» (Ratti 2014, p. 71).

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Conclusions

Let's start our conclusions by quoting David Chipperfield (2020):

> We must surely now redefine ourselves through an alliance with susatinability concerns to maintain relevance, or even existence […] The value of design is that it can represent desires and ambitions, not just fulfill a function or a neat solution, and its relevance depends on where it realises itself.

In the contemporary project, eco-sustainability is therefore a *sine qua non*. But it is also important to remember that the project must interpret the expectations of users and society and allow the realization of a well-made building: the architect's task does not end in the design act, but continues for the entire construction phase and beyond. The digital revolution has therefore changed the way we design: in addition to sustainable and participatory, adjectives such as virtual, parametric, open source, interactive, resilient and others constitute the signals of how an unprecedented vision of the world has merged into the process of designing. BIM itself assigns the entire organization of heterogeneous data to the three-dimensional model of the building, allowing the simulation of the construction site procedures necessary for construction. Will an architecture – or, more simply, a building – then become a "distributor" of services and, above all, a terminal for obtaining data in the near future? We are convinced that the profit production chain in the construction industry is expanding with new elements and new dynamics; the simplest to explore is the so called service architecture (i.e. specialized and digitized assistance for the development of projects) to arrive at the management and maintenance of the building as an object in continuous transformation, equipped with devices capable of offering different performances and of capturing data. The knowledge of the habits of residents, which already happens with cell phones and the social media, will have, in the near future, a greater value than that attributed to real estate as such. Now, beyond the profession / business dichotomy, how is our new role actualized? Will the architect be only the one who defines the project or will he also be able to directly manage these services? Will such a scenario be compatible with the current regulations governing the profession? Finally, what role will the architect of the near future play on such a complex and crowded chessboard? Marginal, we fear, if design remains pure formal play. Central, we hope, if design will be able to seriously respond to the challenges of the contemporary world.

We are convinced that the teachings of the past will continue to be indispensable, but these teachings alone are no longer sufficient: we must look ahead. We will be rewarded to the extent that we are able to renew our approach to architecture. In an interview with Eva Mayer in 1984, Jacques Derrida spoke of «the beginning of a non-representative architecture», outlining a «completely new relationship between surface, design, and space, architecture»[2]. Can we think of a season in which the project is reconfigured as a form of punctual digital graphic deconstruction of architecture, finally aimed at its construction? An important theme within this discourse is finally constituted by artificial intelligence. It would require spaces that we don't have here. In conclusion, we limit ourselves to recalling what Mario Carpo (2020) recently wrote:

> It is clear that digital techniques make new tools available to today's architects and designers, who can and should find the best possible uses for them - because if they do not do it, others will. But to imagine that a new generation of computers will be able

to entirely replace the creative work of architects (as Negroponte and others thought at the end of the 1960s, and many are again thinking today) is neither useful nor intellectually interesting. Of course, today's artificial intelligence has amazing capacities. But even if one of these new "electronic brains" were capable of developing automatic projects (and that does not seem to be an imminent develpoment), I cannot imagine what kind of client would prefer one of those machines to one of us. If only because we continue to cost less – unfortunately.

Notes

[1] S. Zweig, *The mystery of artistic creation*, lecture held in Buenos Aires on 29 October 1940, in *El misterio de la creación artistica*, Sequitur, Madrid 2008, p. 15. Italian edition: *Il mistero della creazione artistica*, Pagine d'Arte, Aprica (CH) 2017 (in the Italian version, the quoted passage is missing).

[2] See V. Magnago Lampugnani (ed), *Der Abenteuer der Ideen. Architektur und Philosophie seit der industriellen Revolution*, Internationale bauaustellung, Berlin 1987; the text was then partially republished in "Domus", n ° 671, 1986 and in J. Derrida, *Adesso l'architettura*, F. Vitale (ed), Scheiwiller, Milan 2008, pp. 94-95.

References

ABBAGNANO N. (1987) – *Progetto*, in *Dizionario di filosofia*. UTET, Turin.

BAUMAN Z. (2018) – *Città di paure, città di speranze*, Castelvecchi, Rome.

CARPO M. (2020) – "Storia brevissima, ma si spera veridica, della svolta numerica in architettura". *Casabella* 914 (october).

CHIPPERFIELD D. (2020) – "In lode della bellezza, di fronte alla crisi". Domus, 1045 (april).

DE FUSCO R. (1984) – *Il progetto d'architettura*. Laterza, Rome-Bari.

GADAMER H.G. (1983) – *Verità e metodo*. Bompiani, Milan.

GREGOTTI V. (2014) – *Il Disegno come strumento di progetto*. Marinotti, Milan.

LÉVINAS E. (1979) – *Le temps et l'autre*. PUF, Paris.

MALDONADO T. (1992) – *Reale e virtuale*. Feltrinelli, Milan.

OECHSLIN W. (2004) – ""Visioni": paravento linguistico o futuro ben delineato? Per un richiamo ai compiti e agli scopi dell'architettura". *Dizionario dell'architettura del XX secolo, Immagini e temi*. Istituto della Enciclopedia italiana fondata da Giovanni Treccani, Rome.

PURINI F. (2012) – *Scrivere architettura. Alcuni temi sui quali abbiamo dovuto cambiare idea*. Prospettive, Rome.

RATTI C. (2014) – *Architettura open source. Verso una progettazione aperta*. Einaudi, Turin.

SCHEER D.R. (2014) – *The Death of Drawing. Architecture in the Age of Simulation*. Routledge, London and New York.

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