Producing Project

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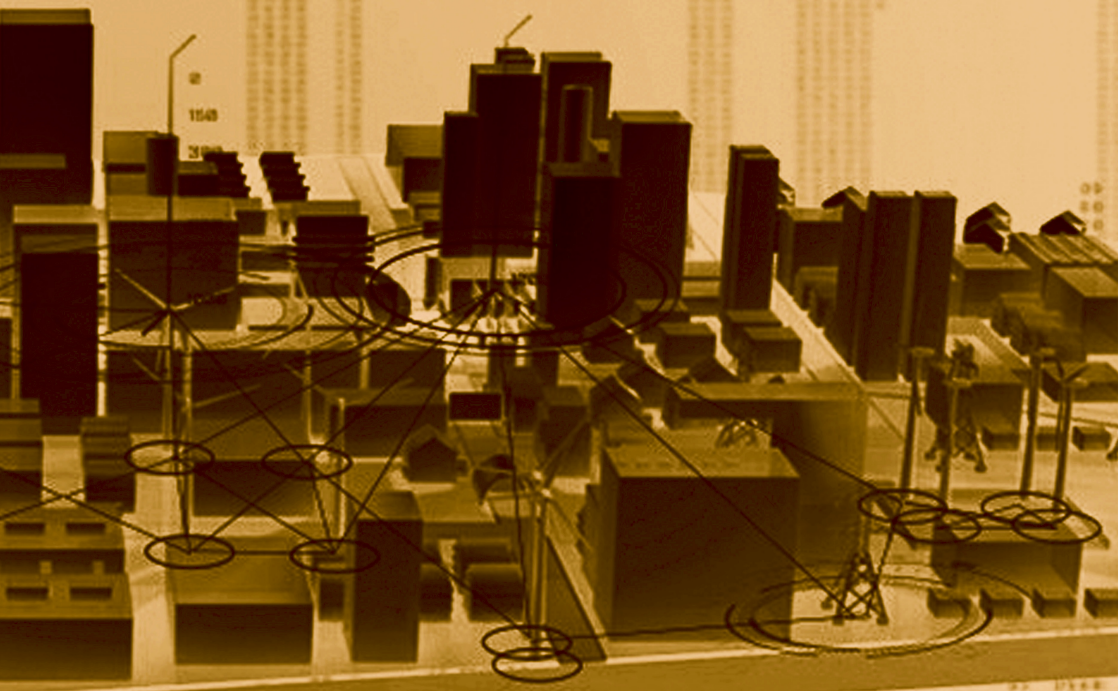

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PRODUCING PROJECT

TECHNICAL CULTURE AND DISCIPLINARY STATUTES

Massimo Lauria[*]

> «Given that the phenomena that interest architecture have to do, in any way, with all sorts of social units called "organizations" and, above all, with the activities they carry out, with the motivations that are at the origin of these activities and with the performance requirements that these postulate, the architect will have not to ignore, for the exact understanding of the consequent phenomena and for their treatment, the fundamental notions of a systemic nature related to this topic. The same procedural character of the architectural facts derives from the procedural character of the organizations» (Ciribini, 1979).

The phrase "Production of the Project" joins in essence it contrasts - a term that recalls planned and repetitive industrial activities - "production" - with another - "project" - which *vice versa* refers to intellectual, if not even artistic, works whose main feature lies in being singular, original architectural and building outcomes and, therefore, not at all repetitive. Almost an oxymoron which, through a superficial analysis, could also induce us to consider its interfering and ambiguous meanings, in some cases, even elusive. But if on the one hand these meanings objectively exist and contribute in making that framework of uncertainties that has characterized the construction sector for a few decades, on the other it seems equally correct to consider - as we will try to do later in this paper - its configuration as a dyad, deeply rooted at the technical culture level, by the powerful descriptive capacity of the boundaries within which the disciplinary debate is currently positioned.

In comprising multiple meanings, this dyad, it can be said, represents the result of a long and innovative path of transformation of the statutes of the architectural project carried out in the last 50 years and to which there is no doubt that should be associated, with undisguised pride, the fundamental contribution offered by the discipline of Building Construction Production and of Architecture Technology.

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The interpretative and critical reading process that derives from it, leaving to the contributions that follow analysis and projections in relation to the scenarios that could be developed out the next few years, intends to highlight the thought of the fathers of the discipline who first intuited, then theorized and, finally, attempted to implement a systematic and unitary idea of the ideational, procedural and productive implications of the sector; placing in barycentric position the objective of considering as goal of the environmental transformation processes, the improvement of living conditions and the satisfaction of the needs of the communities; integrating its ideological significance with the implicit and natural complement of the implementation of the building process through the realization. «The technique turns out» will affirm Guido Nardi «an indefeasible condition of thinkability of the architectural object; an unavoidable *a priori*» (Nardi, 2001).

To try to fully understand that thought, however, it seems imperative to date back to the early 70s of 1900, when our country, which in full socio-economic evolution had bet in all its productive sectors on the great challenge of industrialization, sees simultaneously take shape two important processes of cultural renewal in the architectural and building field.

On the one hand, the Italian architectural culture developed an important theoretical reflection in support of the trends and currents aimed at overcoming the Modern Movement «incapable, in its most important component, that of rationalism, to face the profound and contradictory changes made after the reconstruction period in the 1950s, when, on the other hand, experimentations begin in many directions [...] in the field of the figurative arts, literature, cinema, costumes» (Pazzaglini, 2006) .

Mainly a renewal of studies on language and form was recorded with the technique which, conversely, remained in the background, almost always excluded from those reasonings. Different currents were asserting themselves, even very distinct from each other in terms of characteristics and inspiration. To name just a few: from Aldo Rossi's neonationalism to Paolo Portoghesi's postmodernism; from the very first experiments of High-Tech architecture to the critical regionalism of Kenneth Frampton from which some principles of the sustainable approach will originate.

At the same time, with the enactment of the Presidential Decree 31.10.1969, n 995, which applied the Codignola law to teaching in the Faculties of Architecture, was fixed the practical and conceptual end of the school that had been driven by the provisions inspired by Giovanni Gentile in the early 1920s and by Gustavo Giovannoni.

On the other hand, returning to the disciplinary aspects, the aforementioned general reorganization of teaching, precisely through that provision of 1969 and subsequent implemented ones, ratified the transformation of *Construction Elements*, from a "service" subject for composition and architectural design into an

autonomous area - the Technology of Architecture - which posed the problem of rationalizing the whole ideationing-productioning-usage process and the corresponding control instrumentation by the community, aimed at bringing together design, production and users.

At national level, several schools originated, that are remembered, not only for their numerous scientific publications, but also for the precious and detailed critical analyses proposed in contexts in which disciplinary identity is still debated (Bosia et al., 2013; Schiaffonati, 2014; Losasso, 2017).

Those *magisteri* confirm that the scope of this reform, also born from the long wave of the youth protests of 1968, will not limit its effects to a review of the disciplinary structures but, supported by the ability to view and general interpretation of the phenomena asw well as by a strongly systemic characteristic, it also had important effects on the project. And it is precisely in the design field, as well as in that of training, that from those transformations of thought and teaching practices, in fact, the terms of the still unresolved contrast are born, for then establishing themselves definitively over the following years, counterpointing the supporters of the dogma about the unavoidable need for the fragmentation of knowledge - and specialisms - and the advocates of inter and trans disciplinarity as a possible approach for the interpretation of complex phenomena. While, then, reflections were developed about architectural languages and forms, progressively increasing distances were measured between theories - based on assumptions and doctrines of very high cultural significance but which rarely have had an impact on practical actions - and the assertion, often in contrast to the former ones, of principles which assumed «construction and building production as a cycle of operations characterized by a complex process» (Spadolini, 1981).

A deep revolution in thought and technical culture.

Approaches and methods for structuring sector policies have been definitively changed, new languages were born, the lexicon was enriched with new terms and new meanings. In schematic terms, at least two different area of influence are clearly identifiable.

The first, superordinate and of the context, refers to the general strategies (national and local) of promotion and implementation of a technical policy oriented towards the industrialization of the sector.

The second, which referred to the operational aspects, concerned more closely and exactly the issue of project production.

Two dimensions none completely disjointed; rather understood as complementary.

In the mid-1980s, with their volume *Perspectives of technical construction policy*, Maurizio Costantini and Aldo Norsa took stock of the transformation process in the sector, proposing analyses of possible scenarios of technical and building policy both with reference to our country that to the practices in place in other “guide countries” (Costantini and Norsa, 1985).

This gave body and structure to the need, then strongly felt, to embed the transformation activities of the built environment as part of a concrete industrialization policy. An ambition - then, as well known, shipwrecked - and a theme in those years subject to a close disciplinary debate anticipated by Pierluigi Spadolini and Mario Zaffagnini who, along with many eminent colleagues, declined its meanings and definitions in relationship to production configuration of the sector, to the market, to the planning, to technical regulations as a contribution to the development and control of design and production processes (Spadolini et al., 1979; Zaffagnini et al., 1981).

Those experts christened the birth of the requirements-performance theory based on the identification of needs and their translation into technical requirements; they proposed the integration between the moment of design and that of production. In highlighting principles, perspectives and potentialities referring to the two most significant directions of development of industrialization processes - for closed systems and subsystems or for open components - and in particular with reference to the latter, it owns to the work by Giuseppe Ciribini, Guido Nardi and Ettore Zambelli (Ciribini, 1979; Nardi, 1982; Zambelli et al., 1985) the ability to anticipate scenarios that will occur in the following decades due to the immense growth of the sphere of influence of production of materials and building construction components, able today to condition - even heavily - project, market and implemental policies.

At the same time, Giovanni Ferracuti and Maurizio Marcelloni clearly posed the problem of the necessary renewal, to the full advantage of the qualitative aspects, of the residential building management policies, hitherto based almost exclusively on quantitative assessments (Ferracuti, Marcelloni, 1982).

Finally, almost simultaneously with the reflections on the limits of development that matured in those years (Meadows DH et al., 1972), none secondary were the intuitions of Morris Asimow who posed the question of the interaction between design and environment (Asimow, 1968) and of Thomas Maldonado who has considered construction activity within the field of ecology (Maldonado, 1970).

All these are *prolegomena* of the principles that subsequently supported the affirmation of an environmental awareness in the sector, extended to all areas of transformation of the built environment. To these principles have to be brought back the remarks of the *Milanese* school which referred to the magazine *Recuperare* and which, through the writings of Valerio Di Battista, would have theorized the concept of “project of the existing building” by giving form and substance to one of the key themes, together with the environmental one, of the century.

With the background as a cultural substrate, this wealth of propositions here only briefly introduced, and in not a completely exhaustive way, the debate in those years also addresses more purely operational issues.

The phrase production of the project will thus progressively reach its own complete definition, systematizing the numerous remarks that matured with regard to the idea of technological culture as a guide of the design process with techniques, technologies and process as the main operational tools (Crespi et al., 1985).

The relationship between techniques and design or, in other words, between technology and creativity or, again, between «post-industrial technologies and architectural object» as Giuseppe Ciribini defined it (Ciribini, 1995), thus configures one of the main relative nodes related to the future developments referring to the production of the project.

On the subject, already in the early 1980s, with refined anticipatory ability, Edoardo Vittoria argued that

> «the renewal of production procedures (from mechanization to robotization) derives substantially from the changed relationship between the use of tools and means of work and the technical and scientific knowledge. In this case, for a development not limited to the pure and simple quantitative amplification of the current ways of acting on the environment, it is essential to link more and more closely the processes of industrialization to the knowledge of the methods and technical devices that enhance the human creative value» (Vittoria, 1983).

Still in full evolutionary process, sometimes with conflicting results, sometimes decisive, this relationship, certainly neither stabilized nor accomplished, brings with itself all the enormous potential, but also the related risks, connected to the diffusion and widespread use of the modern technologies in the building constructions sector.

These currently, on the one hand, coincide with the ICT and KET technologies connoting Industry 4.0 and the European Digital Agenda; on the other, with the "invisible technologies", as defined, already a few decades back by Nicola Sinopoli (Sinopoli, 1997).

Their importance and their current growing use are, in the various declension and potentials, well returned by this volume in its articulation in three chapters (Demand for services, offer of competences; Quality of the project, quality of the construction; Designing the project, inventing the future).

However, it should be noted that, although as we have seen, their role and the specific areas of interference with the area of the ideational phase were already clearly defined by the utterances expressed in the past, it emerges at times, also from the reading of the texts that this volume gathers together, a certain perilous logical inversion that tends to transform what could represent a solution for the growth of the sector - the availability of increasingly performing techniques and technologies - with a problem. In fact, their use takes place, sometimes with a fideistic attitude, in other cases with a kind of complacency, more and more often, placing the contents of the project only in the background.

In the context of the current statutes, it is therefore necessary to promote new agreements and new balances between the project itself and the now indefeasible process that makes extensive use of today's techniques.

Methods and tools, goals and means, which due to the repetitiveness and the purely operational value attributed to them, have for some years seemed to have led back project activity in the context of activities and operations procedural therefore substantially oriented to a solution - falling within thus, paradoxically, among the contributing factors of the current crisis of the architectural project. «Too often led by the various knowledge and methods of learning involved to dry up within easily controllable patterns, it risks either anchoring itself to a tradition now emptied of meaning, or vice versa to taking a turn towards an often purely formal technicism» (Nardi, 2001).

Some different civil and professional society portions refer with growing concern to this aspect of the project crisis, this latter transformed in many cases into a portion of the construction process to be kept under control in the same way as any other cost item relating to the production process; hoping for a renewed centrality in the construction processes and considering, first and foremost, the failures and the very high social, environmental, economic costs that its alleged margins produce.

Few conclusive considerations derive, that in the final analysis, intend to pose some of the questions which will be dealt with later in the volume.

This introductory essay, as stated, does not clearly aspire to assume the characteristics of an objective report, it does not constitute a chronicle of the time, much less a "nostalgia operation" with a flavor of cultural restoration.

Too many authors and studies not mentioned for being exhaustive. Equally unquestionable is the awareness of the real extent of the results of that season which we recognize as not very incisive results in terms of implementation, bankruptcy according to someone.

But those results do not detract from the importance of research and experiments - started, we remember it, in an almost detached way and isolated from the cultural context in which they matured - and to which are once again recognized topicality and anticipatory capacity.

A great deal about the current terms of the issues that revolve around the topic has in fact already been said and already written. Entire generations of designers and administrators - and even the current teaching class - have been formed within such a cultural context. And it is precisely for these reasons that, that lesson cannot and must not be forgotten.

It adsorbs much more often than it appears, the tools of knowledge for the recognition of the main risk factors that afflict the sector, and at the same time, the theoretical postulates and the cultural perspectives to direct the consequent actions towards growth and innovation.

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The transformations created about the design activity by the several challenges started by the economic crisis, climate change and environmental emergencies, together with the impact of the Web and ICT on social and productive systems, highlight many critical issues, but also significant prospects for updating concerning places, forms, contents and operating methods of "making architecture", at all levels and scales.
In this context, the cultural tradition and disciplinary identity of Architectural Technology provide visions and effective operating practices characterized by new ways of managing and controlling the process with the definition of roles, skills and contents related to the production chains of the circular economy/green and to real and virtual performance simulations.
The volume collects the results of the remarks and research and experimentation work of members of SITdA - Italian Society of Architectural Technology, outlining scenarios of change useful for orienting the future of research concerning the raising of the quality of the project and of the construction.