

The Contemporary French Model of Architecture and the Construction Professions (1970-1990)

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The presence, amongst clients and actors in the construction industry (building firms, industrialists and manufacturers), of independent professionals on the building and civil engineering markets, is a historical reality. Under the heading of project management professions, their action covers *all the activities intending to study, to conceive, to get the work or system of work carried out, and to assist the operator with the commissioning*. The objective of these activities concerns the question of building. Three groups of building professionals, architects, economists and engineers, are the principal protagonists. The architects by their action on the aesthetic and spatial forms, engineering by its technological capacities, the cluster of advisers by their specialized expertise, are regularly recruited for the production of architectural and urban projects (INSEE, 1998 ; Nogue 2002), During the nineties (although the process already started at the beginning of the seventies) these professions reported changes in the context and in the modes of operating. The new demands from the clients' side, the reorganization of their relationships with project management, the complexity of the decision-taking systems, the revision of the regulations, all contribute to the questioning of the actual identity of the professions as well as their future role. Initially, we show the common characteristics of this professional context. In the second part of the paper, we trace the principal evolutions of the professions in question.

PROFESSIONAL AND ORGANIZATIONAL CHARACTERISTICS

Common properties of project management professions

A first property of the action of these professionals is to provide intellectual services as for the architectural, constructive, technical, economic solutions. The activities of design considered to be essential in our societies, solve the spatial and constructive problems of clients who place the order. Technological progress is not out of step with this appeal for competence in creation, nor with an increased demand for the high performance of products and services (quality), nor the extremely fast change in expectations, which unceasingly calls for novel solutions. Creating awareness, material forms, some affirm a wish to generate new social, cultural and technological conditions. The architects like to present themselves in this way, engineers also when they claim to control many aspects of everyday or future life by the technological dimension.

A second property is a statutory autonomy in order to resist the influence of many other actors who claim to express the actual modernity of the built spaces: the clients who demand without having

the cultural and technical training; the building firms or material manufacturers; the professionals who do not have the same status or the same freedom of thought. This circle stands out from the public engineering, more prestigious and ancient; from the integrated project management of general companies, industrialists, suppliers, public bodies (implemented work and follow-ups under direct management of the state), ancient big public companies and internal client services. It is finally to stand out from the laymen who, essentially, do not have the necessary expert knowledge.

Position of the design, architectural, technical, constructive and urban professionals		
	Layman clients without building specialists	
Public or private clients (communities, companies, real estate developers) Specialized internal services National and local technical bureaucracies	Architects, Engineering, Building economists, Geometricians, Landscape architects, Other designers	Building firms, firms of urban services, of material manufacturers
	Non labeled professionals, of minor rank Technicians, project managers, craftsmen, advisers	

The third property is to work by project (Boutinet, 1991), which forges original cognitive abilities to intervene, often in emergency, in uncertain environments and to react in real-time, according to the varying demands. This working method stands out from a hierarchical, industrial organization, acting by functional and sequential complementarity.

The fourth property is to act within the organizational framework of small autonomous structures. A natural situation for the architects as the liberal profession limits the development of large structures. Many engineers are in an identical situation even if one finds in this sector very big companies. The vocational component of these professions, the type of services and the importance of the local markets encouraged their permanence. Is this an archaic type of organization, or does it correspond to the specificity of the rendered services?

This technical circle is orientated towards the finality of construction through a restrictive definition of its field of activities, project management in the building sector (design, technical development, control). Under the conjugated pressure of professional organizations and authorities, the law

organized the tasks and the missions of everybody. The decree of 1973 concerning engineering and architecture divides the construction structure into three poles: the contracting owner (the client), project management (architects, engineers, economists...), the building firms. The contracting owner law (1985) and its decrees of application (1993) adapt the missions of everybody and the production mechanisms of the built environment. Despite all the uncertainties opened by these laws, the concept of project management, articulated with the activities of architectural and technical design, is the principal base of the role of these actors and their professional imagination. Without it being a homogeneous professional community, this socio-economic space is built on broader values: the performance of expertise, the independence, the public interest as principle of justification.

From the middle of the eighties, under the pressure of more demanding clients, many professional associations joined the restricted circle of those, architects and engineers, who occupied the project management field. The request for advice concerning various types of expertise (legal, economic, strategic), control, management, cultural heritage strategies, exploitation or maintenance, exceeds the mere architectural and building design. The invention of these activities, if not professions, disrupts the narrow definition of project management (the construction) in order to treat the relationship between the strategies of companies and spatial strategies.

Organizational types

By crossing the accent put on the profession or the activity with the type of organization (individual, enterprising), several main methods of working and organization dissociate; plural answers to the contemporary markets of architecture and construction.

	Organization		
	Individual	Enterprising	
Profession	The professional	The company of design	
Activities	The activity of expertise	The company of project management	The firm

The professional offers autonomy of thought, design, creativity, cultural or collective values. The high level of knowledge and independence are the properties to impose an erudite authority. The intellectual stake of the activity takes precedence over the financial stake. The professional asserts prestigious missions from a selective approach of the markets: architectural or urban design (architect); the technical invention (engineering office); financial engineering (expert in construction economics). This type intervenes when it concerns an order of innovation where conceptual and technological performance are sought., and finds a favourable basis of activity with private or public sponsors wishing to renew their range of real estate models.

The design company is the result of the rationalization of the design activities and the operations related to their control. The search for competitiveness guides these companies without disrupting the basis of their approach and role perception: the conceptual approach, of urban, architectural, technical or economic nature. Their force is to a great extent their mono-functional character: they work with people of the same disciplinary universe even if they enter in partnership with some related services or specialism. The formalization of the techniques of work, induced by the codification of the services and the fees, and by the development of data processing, result in a more rational organization of work (division of the tasks by project or by missions) and of competences. The responsiveness to the environment takes place by the creation or the alliance with other structures to intervene on projects of bigger size or on a larger territory. One inserts in the conceptual reflection problems of management and organizational strategy.

The essential task of *expertise* is to make the professional capital profitable. The individual capacities acquired through training and experience, are crucial to create its own company. The reference to the profession is less important, whereas the work autonomy is strongly asserted. The reorganization of the clients and the out-sourcing of activities mechanically generate a big part of the activities of expertise. They also result from the spread of subcontracting in the sector. A consequence, the strong division of labour, is a way of managing the risks for the engineering companies, large engineering and design departments and some agencies of architecture. The totality of the activities of expertise is a self-service system, which the clients use and pay for, in numerous ways, according to their needs.

The logic of *the project management companies* is to offer, inside the same organization, specialisms likely to answer partially or entirely to the missions entrusted by the clients. This extended range makes it possible to maintain a level of activity, to penetrate the markets and to offer complementary services. The concept of service is at the heart of their commercial problems as the profits of productivity are in the center of their organizational approach. Vis-à-vis the clients, the strategies of co-development seek to take into account, in real time, their demands. It does not only concern the quality of the design, but also the advice on many aspects of patrimonial management and maintenance. The corporate culture dominates the professional culture, the service dominates the work of art. The horizontal integration of several professions and disciplines is judicious to solve the inter-professional co-operation. New profiles are generated around commercial functions (business engineers) or project management to control the disciplinary and functional diversity. This obliges them to enter into a stricter organizational framework, a constraining situation for professionals who like their independence.

The *firm* is another face of the enterprising logic. Economic calculation and financial strategy determine the position in this sector: “filialisation”, buy-out, creation of departments, recourse to subcontracting to control the costs of management. It is not the ideal of a professional body, nor the logic of a branch of industry (the professions of project management) which organize the strategies

and the practices, but a conception of the offered service (swiftness of response, rigour of the organization, client support, continuity of the service). In-house, one senses a strong dissociation of the commercial and intellectual functions, the first getting priority. If the professions always have an identity, they are related to organizational charts that evolve unceasingly in search of markets. The architects always exist, the engineers also, but their training yields to the interests of the firm, to its commercial and political surface. In fact, the professional culture is in keeping with the profile of the position, with the advantages of internal training plans, regularly structured and adapted. The professional is first an employee.

Ways of collaboration

It remains rare that each organizational type has all the in-house expertise, ready to meet the demands of the clients. The association between providers is thus necessary for the selective and contingent mobilization of expertise.

Organizational integration is the most rational answer. While having an in-house variety of professional profiles, its synergy is often regulated by organization charts and dependent on the hierarchical structure and rule. Some agencies of architecture in-sourced the competences of a town planner, an economist and landscape architect; others added profiles of decision making assistance; others, even more frequently, the engineering services. But, for cultural and economic reasons, this configuration is limited among the architects. First they privilege design and a reduced size of structures, and subcontracting is more adaptable to the fluctuations of their activity. Those who defend functional integration, think that the corporate culture reduces the disciplinary conflicts and stimulates the service offer.

The network of allies is a successful and dynamic form of collaboration. Independent professionals associate so as to meet, comprehensively, the demands of the clients. Insofar as the quality of the co-operation depends on the sharing or the exclusiveness of professional values (with respect to the project, the client, the money), confidence is essential in these partnerships. Such networks can lead to a collective commercial offer in little invested sectors.

The hierarchical chain is another form of co-operation. According to the markets, its organization is based on two mechanisms. The first is based on the subcontracting of tasks in more or less long chains, subcontracting which generates a part of the activity of the small structures. The multiplication of the specialisms and the search for productivity of large companies contributed to its development. The nerve centre is near the client and the markets. The partly obscure functioning of this technical circle is accepted by many; others accept or undergo it, all disparage it. The second mechanism is based on the authority of a discipline on certain markets. In the building sector, the architect still remains the central actor and the principal client of the activity.

The composite assembly is the poorest form of collaboration and exists on the initiative of the clients. It adds expertise without taking into account the experiences of working. The objective is to have a better control over the performance of everybody, or to exacerbate the competition, ruled by prices. The professionals underline the difficulty of collaborating under these conditions, the risk of conflicts and its harmful effects on the quality.

Finally, three logics of action cohabit. The logic *professions - networks* evolves from a historical base (professions) to a contemporary way of working (networks). The importance of local markets, the need of the independency of advices with respect to the industrial groups or the urban services of local communities, support the maintenance of such a pole. The links, often firmly established between operators, give a real consistency to this way of working. Within this framework, the model of the architects is a reference.

The logic *firm - functional integration* represents the operating organizational rationalization in the sector. Large multi-professional companies, even of average size, place their strategy within this framework. The “filialisation”, the buy-out, the sub-contracting, the external “financing” (funds of investors), support this development. The other professionals are subjected to these companies to carry out tasks with less value added, or, for the most specialized, to become out-sourced services of research and development, solicited to innovate. It is neither the end of the architectural activity, nor of the claim of independence of an always-needed type of service, but it is the end of a professional model.

The logic of *the procedures of expertise - composite assembly* reveals the atomization of a branch of industry where the economic logic (the price) is essential. The cycles of production generate an increasing need for expertise, the more and more important. The clients take the power, harden the clauses of the contracts and multiply the number of specialists to assist them. The offer is based on individualism, on the desire and need to set up in business on one’s own, to acquire a status. The advantage for the client is flexibility, the danger is the exhaustion of the service providers, with effects on the quality.

SERVICE, PROFESSION, WORK ASSOCIATION: PERSPECTIVES TO COME

Professions, activities of service and markets

This technical circle is not only an amalgam of rival professions as shown in an interpretation of their action in terms of services and reflections on the industrialization of professional services (Gadrey, 1994). Two major evolutions go in the direction of a professional rationalization among architects and engineers.

Many professionals recognize the orientation towards a more methodological approach, standardization of solutions what was hitherto rejected in the name of a tradition, privileging the

autonomy of the knowledge out of the administrative constraints and markets. The idea that the client is a unique person and that the architecture only makes prototypes, becomes a part of this representation. Other values of the contemporary economy penetrate the organizational practices of these actors: the importance of the commercial and managerial functions, reconsideration of organization types according to the cycles of activities, flexible management of the workforce (salarisation of key competences, subcontracting of others), organization in networks, increased attention for the relation with the clients.

The technological development is the other vector of this rationalization, a powerful tool for the formalization of the working and management methods that stimulates creativity (simulation, communication) and rationalization by an easier capitalization of information. It favours the business relations by the communication tools the application of which improves in frantic rhythm. This data processing of communication updates the sharing of collective methods between independent organizations and improves the reciprocal training. It is a central process in a social environment where co-operation is difficult and fundamental. If the socio-economic theories on the service markets did not get a full response yet in this sector of architectural and urban production, nonetheless, this technical circle implicitly experienced these approaches.

On the basis of the actual distance between the client who determines the order, and the provider, a situation of service codified by the French laws, the decisive interaction which links the client and the provider in order to formalize the expectations and to determine the architectural and building solution, is underlined. For an optimal effectiveness, both must dialogue to identify the adequate answer. The concourses of architecture and engineering, for a longtime the trademark of the French production, are criticized because of the split between the order and the project. The design contract, an increasingly valued form to allow market forces to operate on the public building market, envisages an interactive dynamics between two formerly separate moments of production.

An analysis in terms of services casts a more pragmatic light and a more commercial connotation of the relation between clients and providers. In the name of the vocation and the singular character of the service of architecture and engineering, the fixed-price service was centered on the design and construction (project management). The wish is to identify, through a regulatory and accountable rigour, corresponding responsibilities, tasks and fees, to keep the invisible, but real work of these professionals obscure: commercial steps, advices, follow-up of the client, control, evaluation. The definition of the work is more economic and commercial than ethical or vocational. This type of intellectual service remains uncertain, because of, often qualitative, evaluation criteria, or, an ignorance of their temporal effects.

To think and design the law courts of the next century, systems of urban transport, habitat structures whose lifespan is of several decades, involves an uncertainty vis-a-vis the rapid changes in the expectations of societies. One needs confidence, individual and collective, to allot the revealing of

the future to professionals. The price is only one aspect of the commercial transaction and the competition that develops between the providers. The comparison of the service offers implies many other criteria: experience and reputation, the capacity to meet the deadlines, the legibility of the offer.

Within this framework, the symbolic labeling, the diploma, the membership of a regulated profession, or others more normative (label, qualification, certification), are reference points that give some confidence in the judgment and credibility of the providers. Professional associations and authorities of economic regulation develop these references in order to protect the client. The profession is a part of these objectified devices. Nevertheless, the relations of service and contracts are guaranteed by standards of co-operation, of reciprocity, of service exchange, of social and political fraternity. In the service relation, one jointly considers the economic value and the contents of the social exchange to safeguard the commercial ratio. It is a usual situation for professionals who often form a part of the local dignitaries or their closed circle.

An interpretation in terms of services gives another intelligibility of the situation of these actors, in particular in their relations to the markets. For a long time, this circle protected its identity through its knowledge, its technicality, its historicity, its independence. Architects rarely proposed the sale of their service as a key of their legitimacy, an argument reserved to some heretics or to companies of engineers already committed in a commercial logic. The economic and societal context not only calls for a logic of service, but also of civic service. These professionals can find in these interpretations some comfort in their modernity.

Professions and competence

All actors on the architectural, building and urban design scene, refer to the membership of a profession (regulated or not), of a collective entity transcending their individual characteristics. Membership, that reveals the possession of a series of reflexes, ways of doing, common attitudes. However, the disciplinary identity, in particular for the architects, the quasi-inborn homology between an activity and a status, the consanguinity by generational heritage, are questioned by two processes: specialization, diversification.

For these professions, the dilemma between specialization and a generalist approach is the subject of antithetic judgments. For the architects, the debate is polemical as there is a profound demand, rooted in the history and the professional habitus, to act on many levels of the spatial design, from the design of objects to the reorganization of metropolises. However, the specialization in a work of design is not contradictory with a holistic vision of the solutions to be provided and the production process. It is inescapable when the number and the type of knowledge to be mastered multiply. In the same way specialization can be a temporary state in a career or the history of an organization.

The professional diversification is another, abundantly underlined process to explain the emergence of multiple competences within a profession. At the beginning of the seventies, *la métamorphose d'une profession libérale* (the metamorphosis of a liberal profession, Moulin, 1973), underlined among the architects a radicalization of the practices where two tendencies cohabited: on the one hand architectural design and project management, on the other hand alternative practices, sources of professional diversification. Every practice that was detached from a canonical figure was the sign of a historical rupture. The urban project, for example (Godier, Tapie, 2005), generates an adjustment of knowledge, methods and positions. Figures of competence emerge. The *architect-town-planner-designer* conceives the urban and spatial composition. His/her profile reflects a clear distance between architectural and urban design. The *architect-manager* has a position of authority in the devices of urban transformations, always near to the policy. He/she is focused on strategic and tactical management of the relational devices, giving up his/her prerogatives in the field of the design. The *architect-programmer* is focused on the preliminary studies and the programming, and has research and consultancy functions. Other figures of competence are structured around the programming, consultancy and management.

The conceptualization of professional activities in terms of competences is the sign of a new work approach in our societies and of the decline of stable forms of professionalism. The hybridizations, observed for the urban production and the architects concern all professional associations: the engineers and the economists whose focus shifts towards consultancy, maintenance and management. They respond to the adapting strategies of the professionals to more unstable and constraining contexts. The increasing separation between initial qualifications and professional competences was partly taken into account by the initial trainings in two ways: the multiplication of the courses and options, more follow-up diplomas. Logically, competence creates new knowledge and cognitive abilities. So, experience and practice play a main role in the relation between the personal and work team qualities vis-à-vis the work situations. And the individualization of careers, noticeable among the architects, more accentuated among the engineers because of the availability of employment is more important, pushes for a definition of posts according to the singularities of those who are judicious to occupy them.

Professions and collective implementation of projects

One of the decisive advances in the analysis of this sector was the inscription of the work of its professionals in a collective production, implying many actors. Hitherto, the tendency is to explore the thinking of the designer and his cognitive activity, including the sophisticated material continuities (machines, software). This prospect keeps the increasing interactions between the principal actors in the building process obscure. Inspired by non-rationalists decision theses, a strategic model gives a more dialectical vision of the relations between programming and mainly design. In situations of weak organizational integration and management of uncertainties (technical,

financial, legal, political), several worlds clash or join in the implementation process of a project. The activities of everyone are superimposed: the projects contribute to the territorial planning; the architectural design nourishes the program and objectifies the expectations of the client ; the construction and the building site transform certain aspects of the initial design; the manufacturers are solicited from the draft phase to test the feasibility of parts of the project. The architectural and urban projects mobilize a heterogeneous engineering (Callon, 1996, Tapie, 2000, Reynaud 2001) which progresses in successive compromises engaging human and nonhuman actors. Competitive engineering (Charue-Duboc, Midler, 2002), is another formulation of the stakes of co-operation.

One analytical approach insists on the “inter-professionality” (Haumont, 1998) and on the existence of hybrid types to describe the multiplication of expertise and its more or less random conjunction, on multiple levels of the implementation of the projects. It is necessary to cooperate and share tasks whereas one does not belong to the same organizations. It is necessary to stay in line with divergent professional cultures. It is necessary to control relational devices of a multiple nature in order to advance the projects. In such a context, the relational dimension takes on a crucial importance. In addition to technical skills, social knowledge is necessary. The professional organizations grow richer with new posts that are more focused on the establishment of relations, within the framework of the daily activities relating to the implementation of the works or in that of the commercial management of the total service. Lastly, profiles especially in charge of the mediation or interface appear (the ability to work together): the aptitude to define procedures of collaboration, to make the actors to function together, to negotiate, to solve conflicts.

For the professions and professional associations who defend their contribution of knowledge in the field of design or creativity, the analysis of their role is not an orphan any more of the links which are formed between all the other protagonists. Types of co-operation manage the contradictory and convergent contributions of many professionals of varied disciplinary origin. So, the theorization of the action of these professionals shifts towards the nature of the links that are established between activities and professions to produce the built objects or planned spaces. To make them work together announces original versions of collaboration in the work that transgress the knowledge of each one.

CONCLUSION

All the project management professionals defend the constitution of an independent critical knowledge base within the framework of a professional organization or circle to which could be entrusted the translation of collective interests. Since the seventies, the project management professions have faced the power of the big companies of the BTP (building and public works) or services. The latter do not hesitate to extend their model of functioning and to confine the role of the professionals to subordinate tasks. The integration of these activities in their organizational bosom through internal services or subcontracting would be the *modus operandi* to endorse the

decline of the professional, freethinker and actor. The financial power of these companies is their principal asset in negotiations with important clients and they bring this as their share of the investment. It is an attractive situation for those companies, public or private, who thus have new resources at their disposal to manage their needs for construction. The price to be paid is that these companies are entrusted with the keys of many aspects of the collective life.

The constitution of this professional space and its identity were fed by two combined movements that questioned the symbolic construction of "project management". Many professionals from different disciplinary origins invested in this world and caused the diversification of the traditional professions, specializing in new services, calling their historical identity into question. The concept of competence reflects this evolution and shows a trend towards complexity. The other movement is the obligation on professionals who preserve a strong autonomy of thought to cooperate. The identification of values or major principles for action lessens the dissensions to the existence of networks that assemble diversified competences. In this inter-professional logic the reference to a profession or a trade, which preaches singular ideals, has to adjust to a collective socio-professional space, which obliges to amend the strategies of each protagonist. Without any doubt the relational dimension will be displayed with more intensity on all the levels of the practice and action.

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