

# The quality of the architectural works: the relational aspects

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## Abstract

*The paper addresses the question of relational quality in architectural works, from a methodological point of view and specifically those aspects that actors which belong to the context of the project (e.g.: public administrations, market operators or civil society actors) would appreciate.*

*Starting from a quick excursus on the concept of quality and its application in the field of architecture, the paper identifies the system of relations linking the architectural building with its context as well as the most relevant evaluative aspects.*

## 1. QUALITY IN ARCHITECTURE

Dealing with the concept of quality, always raises problems of polysemy related to vague or ambiguous concepts and meanings. Therefore, the first problem to face is to define quality. Unfortunately, it is practically impossible to find a generally valid and universally accepted definition. Most disciplines adopt specific definitions of quality, that are valid only in a specific disciplinary context (or a few similar ones) and suitable for the related particular use. In fact, disciplinary structures and paradigms have to face different kind of problems: philosophical (e.g.: is quality an innate characteristic or an attribute of the considered entity?); methodological (e.g.: is quality objective or subjective?); pragmatic (quality, for what and for whom?), and so on. For example, in philosophy, according to Plato, quality means “innate excellence”. In economics, from the production point of view quality means the desired or expected quantity of some relevant attribute of the product, while, from the consumer’s point of view, quality means the capacity to satisfy his/her needs, desires, expectations. Moreover, in terms of economic value, quality means an acceptable quality at an acceptable cost. From the managerial point of view, engineers, define quality as the level of conformity of the product to the project or prototype. (Garvin, 1984). All these definitions both detailed and specific, and general are substantially pragmatic and instrumental.

The situation is quite the same in architectural disciplines

(Acampa, 2019; Forte, 2019)<sup>1</sup>. The bill presented and approved at the VIII Congress of Architects on May 2018 affirms that the architectural quality is “ what allows the satisfaction of the general well-being of citizens within the space where they live” specifying it in terms of beauty, proper relationship with the landscape, aptitude to ensure well-being and social cohesion, environmental improvement, safety, energy efficiency. Besides, the quality is measured in terms of optimal satisfaction of each value, within a global and unitary process of consistent designing which starts at the creation phase and ends with the final realization of the project (Consiglio Nazionale degli Architetti Pianificatori Paesaggisti e Conservatori<sup>2</sup>, 2018). Another example, is the Italian Government’s bill “Legge Quadro sulla Qualità dell’Architettura” approved on 24/07/2003, which specifies that “quality does not only mean artistic interest, but also technical suitability of buildings for their intended uses, ability to adapt and maintain over the years, ability to improve the quality of life of people, fostering social cohesion and relationship with the environment, and the sustainability” or also “the outcome of a consistent development project that takes into account the functional, social and formal requirements underlying the design and imple-

<sup>1</sup> From here on, the attention will be on the quality of the works of architecture that is the subject of these notes.

<sup>2</sup> Italian National Council of Architects.

mentation of the work and that ensures its harmonious integration into the surrounding environment”.

These examples clearly show that quality in architecture has many aspects. And it is equally clear that the definition of the architectural quality is a complex and remarkably ambiguous issue, in which social and technical aspects as well as physical and abstract ones, are mixed/combined fluctuating between objectivity and subjectivity, permanence and temporal dynamics, etc. and whose perception varies in time, space and individuals. Therefore, it is difficult that all the aspects (attributes, criteria, etc.) abstractly defining the architectural quality may be collected in a single definition. Consequently, if the different aspects of the architectural quality cannot be homologated, it should perhaps be more realistic to speak of quality in the plural: the qualities of the architectural work.

It is no coincidence that empirical interpretations of quality get a great importance/relevance in the field of architecture. But this immediately raises a fundamental methodological problem: empirical knowledge takes into consideration only a few aspects of quality that are operationally relevant and detectable ignoring the quality as a whole. Therefore, the resulting knowledge of quality is, by definition, partial as it is not able to encompass all its aspects. This means that we should be satisfied with partial interpretations, responding to limited needs (Lerner, 1971).

This means that different definitions may coexist, each having a limited and finalised validity. There is no concept of quality having a general and absolute validity. For the same architectural work, in the same place and time different and even contradictory interpretations of its quality can coexist. Therefore, it is necessary to establish the range of the validity of the analysis, explicitly accepting that “the qualities of the architectural work” are in the plural. As a consequence, for the sake of clarity, it should be necessary to specify which “quality” we are talking about (e.g.: technical quality, aesthetic quality, spatial quality, etc.).

Nevertheless, it is possible to identify some general aspects that characterize the architectural quality. For example, quality is not an intrinsic characteristic of the building, but it must be sought, designed and built. It does not rest on single elements of the building, but it is the result of the intertwining of many factors. This means that the various dimensions of quality tend to complement each other. Due to its complex nature, the architectural quality is not rigidly programmable. A new dimension of quality can irreparably destroy the previous level of quality. So, any change in the building should take into account the quality lost/destroyed. Complexity and constraints on resources and products limit the possibilities to manoeuvre quality. Consequently, often what it is gained in one aspect of quality may be lost in another. Therefore, it is important to balance the different attributes that define quality.

It is not easy dealing with this situation. In addition to the conceptual difficulties just mentioned, the characteristics of architectural design and building production make it difficult to understand and govern quality from a discipli-

nary point of view. The design and implementation of the architectural work are difficult and complicated activities requiring relevant specialist skills not easily available and expensive to find lasting a long time, involving many operators, and entailing high risks (economical, social, political, institutional, etc.). Moreover, design and implementation errors are difficult to remedy because both design and implementation have significant irreversible effects that increase according to the development and implementation of both the drafting of the project. Due to the different competencies and powers – between those who promote, draft, control and implement the project and who uses the building/product – the promoters and the users can hardly control the quality of the project and its result because there are no efficient reliefs/remedies to the opportunistic behaviour. As a matter of fact, the agents, are encouraged not to respect their commitments (moral hazard<sup>3</sup>) concealing frauds. This requires a systematic check of the quality and implementation of the project throughout the whole development of the project and the implementation processes.

Nowadays the prevailing disciplinary approach defines the quality of architectural building from a technical-managerial point of view (Fattinanzi et al., 2018), connecting the performance of the building to the needs of users (expressed as quantifiable requirements).

Therefore, the prevailing procedural model for designing the quality of the architectural work is based on the construction of “performance” regulations. At the basis of these regulations, there are the relationships between the performance of the building and the needs of the potential users, that are mediated by environmental, economic and cultural factors. According to these models, the quality of the architectural building depends on a set of mainly technical requirements, that are measured by significant parameters and organized into classes. Such parameters represent the aspects that are significant/relevant for the quality of the building (safety, well-being, usability, appearance, management integration, environmental protection, etc.). Therefore, quality is defined as the set of requirements whose values (according to an ordinal scale) allow both to establish the threshold of acceptable quality and verify the level of the quality of the project.

This kind of procedure is deemed objective because it unequivocally defines the requirements; uses scientific-quantitative models of analysis; establishes an external acceptance threshold of the quality level of both the project and its components. Thus defined, the quality becomes an “objectively verifiable fact” that can be quantitatively measured.

<sup>3</sup> According to the agency’s theory, moral hazard (generated by informational asymmetry) is the unfair behaviour of the “agent” who, not carrying out the agreed task, causes losses to the “principal” who is unable to measure them exactly.

The decision-making model related to this approach is essentially hierarchical: the requirements that define the quality of both the design and the architectural building are guaranteed and verifiable<sup>4</sup> being established by standards, good practices, quality assurance procedure (e.g.: public and private technical offices, screening procedures, etc.)<sup>5</sup>. The decision-making process is mainly developed within the design process. The decision-makers (commissioner and designer) directly make all the decisions and choices concerning the quality of the project according to the performance framework and the related requirements. During the project process, the decision-makers identify and pursue the quality objectives and the contractor – without prejudice to any required adaptations – applying them in the implementation phase. To choose between the various possible quality alternatives, the actors use almost exclusively self-assessment procedures, based on standards, protocols, good practices, etc. Subsequently, the person in charge verifies the result: “the project”.

Shortly, according to this approach, the quality of the work is a technical problem that requires specialist skills to be designed, built and evaluated.

In terms of the quality of the architectural building, the demanding-performance model has considerable advantages during the entire project development. It represents an essential component of architectural and engineering disciplines since it is coherent with their paradigms and fits into technical practice (Fattinanzi, 2018; Fattinanzi et al., 2018). But, in the real estate market, institutions and operators also use it as a tool of project control. From a methodological point of view, the demanding-performance model has a scientific status that favours its wide acceptance due to the adoption of universal and standardised units of measurement and a strong theoretical anchoring to widely used systems of knowledge such as the neoclassical system of economic theory.

Nevertheless, the performance model is not able to cover all the aspects that determine the architectural quality. In principle, its main limit is that it is a pragmatic model with a strong technical basis and that it refers to neoclassical economics. As a consequence, it is unable to provide answers to those aspects or values of the architectural quality that do not refer to technology (such as social, political, economic, symbolic and aesthetic issues) but, nonetheless are integral elements of architectural building.

From a methodological point of view, the performance

model is a kind of model that tries to give quantitative solutions to the issue of quality. In so doing they take for granted general questions – not solved at all! – such as the feasibility of the quantitative interpretation of quality, the relationship between quality and quantity, the question of measurement, the issue of qualitative aspects aggregation, the relationship between qualitative and quantitative aspects (bearing in mind that the use of multi-criteria analysis techniques is not always a suitable solution), the question of measurement, etc. (Lerner, 1971). From the point of view of the implementation domain, since the model follows a quantitative approach, it implicitly affirms its autonomy against other approaches such as aesthetic, symbolic, political, economic-social, etc. In this way, should it be considered a “prius” compared to other approaches, there is the risk of being self-referential.

In the decision-making process, the risk to make hazardous simplifications increases as far as there is a rise in project complexity. For example, by assuming only the existence of direct causal relationships, or the uniqueness of preferences, or favouring the “efficiency” criterion over “effectiveness”, etc.

In general, there is the risk of providing a distorted representation of the quality of the architectural building interpreting it as an autonomous object separated from its context, and of limiting the search for quality within the sole disciplinary rules (that is, the risk of being self-referential).

In essence, the application of the performance model to architectural works is not neutral. It is an important partisan tool conditioned by its characteristics. In other words, this model is able to strongly support and control the choices of the “production of quality” but it is not adequate to meet the demand of knowledge and information that enable promoters and stake-holders to judge the project effects from their point of view. The risk is producing a technically efficient, but poorly effective product.

There is a double need, first of all, to pay attention to the limits of the scope of the model and, secondly, to explore new ways to govern the architectural quality, considering all those aspects that, by their very nature, are unable to deal with the performance method.

## 2. THE RELATIONAL QUALITY OF ARCHITECTURAL WORK

As it has been said before, the quality of the work of architecture emerges from the intersection of different dimensions (aesthetic-symbolic, spatial, environmental, social, political-institutional, technical, economic, etc.), which cannot be expressed by any technical analysis. If, the architectural work is not an isolated and technically autonomous object, each one can define its quality differently. On the one hand, any architectural work is part of a larger territorial structure (the city, the landscape,

<sup>4</sup> It is to underline that the performance approach is so generally widespread that the market adopts its criteria using them as components of the building offer as well as of the price.

<sup>5</sup> The role of the technic committees is particularly important in that situation.

[ the environment, etc.) that defines the physical, institutional, social context<sup>6</sup> in which it is located. On the other hand, any work of architecture has a social dimension, which relates to its decision-making environment, that is, the social actors of the territory (individuals and communities). Therefore, the way in which the architectural work relates to the social system is crucial in the definition of quality. It is possible to interpret the quality of the architectural work from the points of view of those who, while not directly involved in the production process, are interested in it nonetheless.

It is a radically different approach from the performance approach, not only because it changes the point of view (from the production to the social use of the architectural building), but because it changes the very conception of quality. There is a switch from the technical interpretation of the producers (i.e. commissioners, designers, construction companies) of the architectural work, to the social interpretation of the actors of the decision-making context (i.e. civil society, institutions, the market, etc.) those who appreciate the architectural work having direct or mediated interests in its effects and consequences.

The two formulations: “production of quality as a technical event”, which belongs to the producers, and “appreciation of quality as a social event”, which belongs to the civil society, highlight the substantial difference between the two approaches and therefore legitimize the existence of a “social quality” of an architectural work as an autonomous category compared to technical quality<sup>7</sup>.

From a social point of view the quality of a specific architectural work can be interpreted as the interface that binds it to the social actors who belong to the decision-making context: its system of social relations.

In this case, one could define quality of architectural work as “the set of properties and attributes (social, economic, physical, technical, symbolic, functional, cultural, etc.) relating the architectural work to social actors and that specify its way of being in that context”. In short, a “relational quality”.

Then, both performance and relational quality can be understood as two different but not alternative visions of the same complex and multifaceted question, which is the quality of the work of architecture.

In the first case, the point of view of the “authors” of the work is taken into consideration, focusing on the technical aspects and outcomes of the project. It must suit a set of requirements, legal, technical and economic standards, agreements, etc. and must match good practices. In the

second case, we take into consideration the point of view of the actors in a decision-making context focusing on both the problems to which the work should solve, and on its effects/consequences on the work’s context. There, *those who decide* – commissioners and designers – about levels, characteristics and quality attributes of the project or work. Here, *those who appreciate* – the social actors of the context – in terms of outcomes, effects and consequences. We are in the presence of two different and autonomous interpretations, although intimately linked by their reference to the same architectural work.

This attention to the social dimension of the work has significant consequences on the interpretation of the quality of the architectural work, since it is no longer an absolute concept, but becomes a relative one, historically determined, variable over time and depending on situations. Thus interpreted, the work is a unique and unrepeatable object, which changes as the context changes. This is not a trivial consideration from a methodological point of view; in fact, if the work is unique and unrepeatable<sup>8</sup>, quality analysis built on objective considerations cannot be logically transferred to the social interpretation of quality, which is based on subjective opinions, considerations and judgments, which can be different and dependant on who interprets the work.

A consequence of this different approach is the loss of certainty, due to the disclaimer of objectivity in the concept of quality. In this subjective interpretation, it is no longer possible to guarantee to all the involved actors that the requested quality levels will be reached. In fact, the judgment of relational quality is questionable; but, above all, there is no interpretation (or judgment) that is absolutely dominant over the others: the excellent quality does not exist. And both qualitative and quantitative aspects become equally important to define quality.

The assessment of the quality expressed in this way is therefore detached from direct dependence on the technique, which becomes only one of several aspects to be considered. Therefore, judgments on architectural quality open to a multidisciplinary interpretation: aesthetic, symbolic, perceptual, cultural aspects, etc. become just as important as technical, functional, and economic ones.

Another concern is related to the dynamically complex system of relationships that link quality to the actors of the context, and vice versa. On the one hand, the context affects the quality of the project. While on the other hand, quality can change improve, worsen, transform the context. Given the multiplicity of views on the quality of the project, behaviours and actions of all stakeholders (produc-

<sup>6</sup> Context here means the set of circumstances, facts, knowledge and beliefs that characterizes the specific situation in which the work is placed and that guides its social understanding (see Trecani, Vocabolario online).

<sup>7</sup> There is a third aspect of quality, linked to the individual’s satisfaction, but it is not of concern here.

<sup>8</sup> See Scala, (2010), furthermore. This observation justifies the autonomy of the relational interpretation of quality because, while according to the performance model the quality of the architectural work is a repeatable technical result.

ers and actors of the context) are not precise and unequivocal, but they allow interpretations, diversities, disagreements and dialogue.

The crux of the matter is that the quality of the work is chosen (decided) by the designers, but is appreciated by the actors of the decision-making context<sup>9</sup>. The design is specified by designer's ability to read, interpret and translate the relationships between future architectural work, its specific contexts and that of the civil society which it belongs to into architectural forms. But since both the architectural forms and relationships are not "precise and unambiguous" even if they are established *ex ante*, it is very important to see the way they will be interpreted by those who produce the architectural work. As a result, decisions associated with design quality become a mixture of technical decisions, in which content prevails, and political decisions, in which the system of relationships with the context prevails.

In conclusion, a good quality depends not only on the technical skills of the designer but, at the same time, on his ability to read and interpret the context: design choices on quality are in tension between intuition and reason, between discretion and certainty, experience and perception.

The analysis of the relationship between the context and the project is complicated because the actors of the decision-making context have cultures, know-how and interests that are often different, sometimes even antagonistic. Therefore, it is not possible to use the simplification implicitly present in the analysis of technical quality, that is, that commissioners and designers have complementary interests and act in a coordinated way. As a result, the relations between those actors and both the design and the architectural work cannot be standardized into predetermined schemes, but it is necessary to take into account a multifaceted and mutable reality depending on the circumstances.

Starting from the fact that there is a "before", a "during" and an "after" of the design, it is reasonable to assume that those who govern and design occupy the space of the "during", while the "before" and the "after" are occupied by social actors. The "before" is above all the decision-making space of public institutions and the market, the "after" is above all the social space of those who use the work or enjoy/suffer its effects and consequences.

Public institutions and market define the contours of the decision-making framework within which the design decision-making process develops and, consequently, constrain or condition its content and quality levels. Public institutions through plans and programs, rules of law (urban planning, construction, environmental, technical, etc.) and

incentives, focusing especially in the medium term; market mainly through the mechanism of economic and financial compatibility, supply-demand relationship, etc. They therefore operate as "design quality regulators" tools, and design decision-makers are obliged to confront them, in order not to take the risk of failure of the initiative. Although some "decision-making spaces" can be negotiated, they are mostly rigid and pre-established with respect to the design activities, so, the more specific and detailed the rules and conditions imposed by the regulators on the quality content, the less are the degrees of freedom available to the designer.

It is important to note that state and market behaviours are very similar: "both are impersonal systems, in which individual differences are suppressed or at least severely limited" (Arrow, 1997).

The "after" is above all the area of appreciation of those who use the work or who enjoy/suffer its effects and consequences (communities, organizations, interest groups, etc.), whose ability to influence the design is conditioned by their power and negotiating capacity.

### 3. SOME CONSIDERATIONS ON THE EVALUATION OF RELATIONAL QUALITY

As already seen, the architectural work is a complex object that is part of an equally complex decision-making context and it is impossible to find an exhaustive definition of architectural quality. Consequently, and depending on the point of view of the social actors, the evaluations of architectural quality can be only partial. Quality evaluations cannot establish, *a priori*, whether that particular project can ensure the actual achievement of the expected quality that is the task of the technical evaluation they should rather detect, firstly, "whether", "how" and "in what perspective" that architectural work/building will qualify or will be useful to all or only some actors of the decision-making context and, secondly, what will be the appreciation of the social bodies.

The content of the relational evaluations is the identification and understanding of the relationships that link the architectural work to the social structures of the context, in other words, the evaluation of the effects and consequences of the project on the territory and the social structures, taking into consideration their interests and objectives.

It is important to note that, due to the different evaluation interests, objectives and situations (hardly to homologate), the different categories of actors have different objectives and interests and interpret differently both the meaning of the evaluation criteria and their relative importance. Therefore, a single overall synthetic evaluation is not sufficient to satisfy the knowledge and informative interests coming from the context and who are involved in the architectural project. From all this follows the specialization of the evaluations depending on the category of actors. It will be possible to structure the "relational evaluations" into several classes, each belonging to one of the social bodies

<sup>9</sup> The distinction between those who produce the quality and those who appreciate it highlights the relational aspect of the problem by tying the designer to the actors of the context.

[ of the context (institutions, economic actors, social actors, etc.), each having a different specificity, even if interweaving and overlapping may happen. For example, institutions mainly focus on the compatibility of the project with some quality regulators and the analysis of the possible project impacts on the actors' expectations in terms of strategies and general interests (re. to environment, health, traffic, etc.), etc. Economic actors pay attention mainly to the relationships between the architectural work (or project) and the market (e.g.: financial compatibility, demand and supply balance, prices, etc.). Social actors are interested in the effects of the architectural project on wellbeing, in satisfying the unfulfilled social demands, in the localized environmental quality, etc.

It is key to note, that all these evaluations pay little attention to the technical aspects of the design and construction of the architectural building.

Relational evaluations have to face important methodological problems, including the evaluation perspective, the uniqueness of the architectural project, and the subjectivity to the judgement.

The question of the prevailing evaluation perspective<sup>10</sup> means that an effective and useful evaluation should be able to provide effective replies to the actors' knowledge and information needs. Therefore, in front of a multiplicity of interests and available knowledge, it is impossible to either homologate or standardize the choices of what, how and by which criteria and priorities to evaluate since they depend on the strategy that the actor in consideration is pursuing at that moment. The multiplicity of actors, having different interests, objectives, constraints and preferences, correspondingly requires different evaluations, each of which should be carried out based on a specific evaluation perspective.

This means that the evaluation of architectural relational quality encompasses a set of different evaluations. Each evaluation is based on a different dominant perspective, specific to each actor involved. This may cause considerable confusion because each kind of actor tends to settle/assert his/her (often contingent) definition of quality, trying to impose it over all the others, while ignoring or underestimating anybody else's. This may often produce negative consequences in the negotiations or deliberation processes. For example, in participatory decision-making processes, institutional actors normally equal the "high quality of the work to the high territorial quality", connoting/providing the architectural quality with general and strategic attributes that are relevant for the territory in the medium term (Bentivegna, 2016). On the other hand, the city inhabitants meet the "high quality of the architectural building to the high level of satisfaction of needs", connoting quality in terms of individual and collective satisfaction.

<sup>10</sup> The evaluation perspective is the point of view of the actor for whom the evaluation is carried out.

Therefore, the evaluation perspective obliges the evaluator to precisely define what "architectural quality" means or, at least, to declare its specific nature<sup>11</sup>.

The uniqueness – related to time, space and context – of the architectural work, is another obstacle that prevents the direct comparison. There is no possibility of resorting to a repertoire of recurring cases. The problem might be solved if, to estimate the levels of relational quality, it was possible to build hierarchies and comparisons within a continuous (without singularities) function. In this case, the qualities of the works would be comparable to the amount of the desired level of the specific attributes. Regrettably, the evaluator has to consider separately a considerable amount of uniqueness adopting different procedures. Therefore, the problem is general and arises whenever we want to measure quality (Lerner, 1971). One can formulate it as follow: "how can we evaluate the quality of a work of architecture in comparison with similar and apparently identical ones at a specific moment and in a particular situation?".

Adequate indices and classifications can solve the question of how to measure in that context, in that situation and for those social actors the irreducible, distinctive features of a specific architectural work, that is, to measure its distinctive social features in comparison with all the others in the same category.

Once the architectural quality is identified and measured, it is necessary to identify all the architectural, urban, economic, social, environmental, etc. aspects that are mainly relevant at that moment, in that context for those specific social actors and that should be evaluated since the social actors, expressing/representing the dominant evaluation perspective, demonstrated a strong interest in them.

This procedure can be developed in two directions. The utilitarian one rests on a small number of assumptions. The pragmatic one gathers together all the relevant considerations of the reference actors and structures a deliberative process, based on dialogue, according to the approach of the so-called democratic evaluation (Berni and Gabrielli, 2018).

The subjectivity of judgement is an issue always present in any quality assessments. It concerns the shift from data to judgement. This is a problem that typically affects any specific case and personal judgment: in these evaluations, the personal judgment is decisive both in the collection of the data, drawing inferences and formulating the final judgment. Therefore, these evaluations do not imply an objective judgement since objectivity requires total information, while the available data can only be partial. If the evaluation of quality can only use partial data and depends on the per-

<sup>11</sup> It is to note that an underestimation of the role of the "dominant perspective" may cause fairly widespread errors since events, situations, data, priorities, etc., being examined not considering the multiple interests, expectations and possibilities, might be incorrectly compared to the benchmark.

sonal judgement of the evaluator, to ensure the quality and reliability of the evaluation, it is necessary to rely on scientifically sound procedures for data collection (publicly accessible and available) as well as on publicly supported evaluation programme. At the same time, the evaluator's credibility is equally important that is, his/her competence/skill and freedom of judgment.

In conclusion, if the concept of the quality of the architectural work expands to include the social actors' point of view (institutions, economic operators, civil society), both the paradigm that interprets the architectural work as a technical fact and the one that supports the objectivity of

evaluation change. Focussing on the relationship of the architectural work (or project) with the actors of the decision-making context, concepts such as the complexity of the work (whose technical contents are only a part of the whole), the plurality of values, the multiplicity of methods of measurement, etc. must be taken into account. At the same time, the evaluation methodologies change. Depending on the different points of view, the evaluations of the same work become different but equally legitimate. This requires the adoption of some, not necessarily evaluative procedure, to allow the coexistence of that plurality of judgments (Bentivegna, 1997).

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