Imagine the 'Reconstruction'. A Small Manual on the Public Housing

Francesco Maggio, Stefano Dell'Aria

Abstract

This study, starting from the unpublished graphic transcriptions of Giuseppe Vaccaro, subsequently published by Francesco Moschini in the volume "La casa di serie. Appunti sull'abitazione 1940-1942", intends to trace the elements of a part of the design thinking that pervades rationalism and finds its strong expression in the form of the 'scheme'. The short manuscript of the Bolognese architect is a real manual on the mass production houses written between 1940 and 1942 when he was called to participate in military actions during the second World War. The text, the schemes and the drawings elaborated by the Bolognese architect on the one hand not only seem to anticipate the housing crisis that would have occurred at the end of the conflict, but on the other they highlight its imaginative power held firm both by the careful knowledge of the manuals and from the existenzminimum themes. The representations accompanying the manuscript represent an imaginative and prefigurative path of the future that would materialize shortly thereafter, tackled by Vaccaro in a different way as regards the building typology but not for the studies on the accommodations that are affected, in an evident way, of the previous analysis of Alexander Klein and Enrico Agostino Griffini.

Keywords: project, scheme, imagination, history, existenzminimum.

Introduction

In 1982, Francesco Moschini organized an exhibition at the A.AM./COOP in Rome, also publishing the relative catalog, in which he exhibited the manuscript and related drawings by Giuseppe Vaccaro about his studies on the house theme. The small volume is what remains of the Bolognese architect's studies drawn up during his forced exile at the front and is the only source for the development of some considerations regarding an investigation into a topic related to the themes of post-war reconstruction.

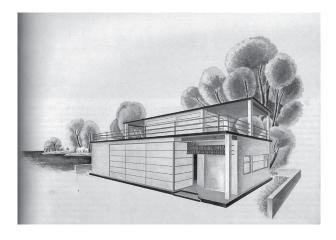
Giuseppe Vaccaro with his manuscript marks an important step in his professional career and, although the definition of the study has never reached a definitive drafting, it represents an accomplished and in-depth intervention on the theme of the public housing. By working towards this goal, he becomes part of two historical paths: the first, started in the early years of the century by the architects of the Modern Movement, which inspired by the themes of the existenzminimum, the home for all and the new post-industrial social contingencies, tries to give a new definition to the theme of the house; the second, in potential form, as a spokesman for the manuals that since the end of the nineteenth century in Italy had seen generations of architects trained in manuals that have gone down in history as educational reference points.

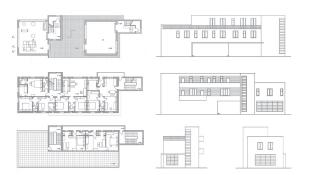
In fact, Vaccaro represents the figure of the architect who, observing the social contingencies in which he lives, cannot avoid using his knowledge to design houses that would overcome the vast problems that Italy faced in the mid-1940s,



Fig. 1. L. Figini, G. Pollini. The electric house. Watercolor perspective (Maggio, Villa 2008, fig. 531, p. 178).

Fig. 2. P. Bottoni. Group of elements of public housing (elab. Francesco Maggio).





such as urbanization of the population and, especially in the Italian case, the need for housing due to reconstruction after the conflict.

To better understand Vaccaro's modus operandi, it is appropriate to investigate the influences that rationalism had on manuals "the manuals, which, stimulated and influenced by rationalist research, were produced and published in the following years, before and after the second World War, characteristics substantially different from the classic manuals of the treaties; while the latter was a collection of paradigms and stylistic rules, post-rationalist manuals offer a systematic classification of the building types, the functions connected to them, the distribution schemes and the dimensions and characteristics of the equipments involved. The basis of these manuals is human being, the goal that 'human measure' sets itself; they start by reconnecting in this to the models of humanism, to the ideal man designed by Leonardo da Vinci, from the measurements of the human body and gradually provide the data on the clothing, furnishings, tools and machinery that man uses in carrying out his activities" [Baffa Rivolta, Rossari 1975, p. 39].

The first example of this current can be considered the one by Ernst Neufert, 1936, which was updated with subsequent editions and translated and published in various languages; it was inspired by the manuals of Mario Ridolfi and Irenio Diotallevi and Franco Marescotti.

The Modern Movement, throughout Europe, had already given concrete results, deepening the theme of the existenzminimum and standards with even apparently contrasting declinations.

In Italy the situation was strongly backward, on the one hand because the regime did not directly address the problem and on the other because the class of Italian architects seemed to be uninterested in the topic.

In reality, not everyone and not everything was silent; the themes of the house and of the existenzminimum were developed at the Milan Triennials starting from 1930. Interesting is the experimentation in the field of electrical services for housing inside the Casa Elettrica (fig. 1) presented at the Milanese exhibition from Gruppo7.

Three years later, on the occasion of the *V Triennale*, it is setted up the *House exhibition* in which the *Group of public housing elements* designed by Enrico Griffini, Eugenio Faludi and Piero Bottoni for the S. Siro district of Milan is presented (fig. 2).

Giuseppe Pagano was one of the few professionals who were interested in the matter and who in more writings in

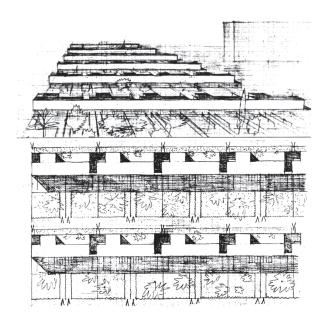
the pages of *Costruzioni-Casabella* is sensitive to the subject, and not least is the contribution of Giuseppe Samonà in making manifest the Italian situation comparatively to the European one in his book: *La casa popolare degni anni '30* [Samonà 1930].

The book, published in 1935, is proposed as an extensive overview of what happened in Europe on the theme of the public housing accompanied by numerous graphic and theoretical references. In it the author will be able to grasp, starting from the typological and architectural specificity of the various interventions, the relationship between the constructions and building policies in the various countries by making a careful analysis of the Italian situation and finally proposing a paragraph dedicated to the studies of Alexander Klein [Baffa Rivolta, Rossari 1975], emblematic figure of the research on the public housing and link between many of the protagonists of this path. Parallel to these events it is useful to observe the contribution of those authors who, with the preparation of manuals aimed at the modern reinterpretation of the theme of building have introduced linguistically, theoretically and technically a new way of understanding architecture in Italy, providing a theoretical and graphic basis on which generations of architects will be trained later.

The public housing between the two World Wars. Brief history of manuals

There were three manuals published in the time segment defined by the two World Wars and which had a profound impact on the users of the time. The first is the manual by Enrico Griffini, Costruzione razionale della casa, published in 1931 [Griffini 1931]. The text contains extensive excerpts of Alexander Klein's works and research on the house but not yet widespread in Italy. "The merit of Griffini is having received a work, such as Klein's, which has remained marginal for a long time compared to the achievements of the rationalist movement in Europe, but which contains elements of profound novelty in the method of designing the residential building type. Klein introduces systematic elements for a rational assessment of housing qualities" [Guenzi 1993, p. 195]. In the manual the innovations introduced by the modern movement to the theme of the existenzminimum are documented, but the ability to grasp the differences that characterize the Italian contingencies compared to the European ones is missing, failing to analyze the question of the house in relation to the socio-political territorial issues. Fig. 3. G. Vaccaro. Terraced houses. Plan and perspective sketch (Moschini 1982, figg. 2, 6, pp. 50, 52).

Fig. 4. G. Vaccaro. Terraced houses. Plan and perspective sketch (Moschini 1982, figg. 2, 6, pp. 50, 52).



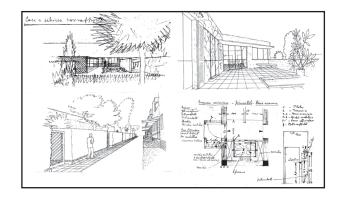
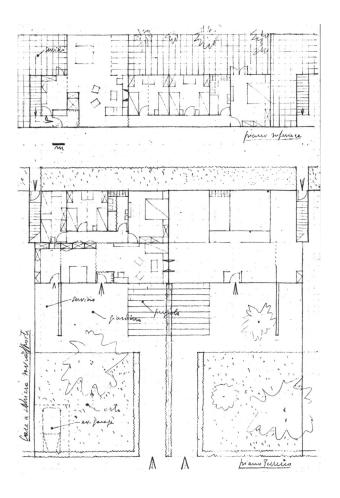


Fig. 5. G. Vaccaro. Terraced houses. Perspective sketch, perspectives and detail of the entrance (Moschini 1982, figg. 3, 9, 15, 16, pp. 50, 55, 60, 61).



Edoardo Persico in 1933 from the pages of *Critica letteraria* will negatively judge the group of public housing projects designed by Griffini and he will say that starting from petty bourgeois premises, he resolves everything in a series of stylistic compromises: "In Griffini's project [...] the public housing is instead a bourgeois taste transition, extraneous to any real solution of the problem» [Guenzi 1993, p. 197]. The second manual is that by Irenio Diotallevi and Franco Marescotti. They will produce, in the late 1940s, a series of very in-depth studies on the public housing first published in *Costruzioni-Casabella* and later collected in the volume *Ordine* e destino della casa popolare (1941). Starting from 1948 the volume will be published in a free cards format and titled as *Il problema sociale*, costruttivo ed economico dell'abitazione [Diotallevi, Marescotti 1948].

The two architects, aware that the rationalist movement had failed to show itself correctly in our country, try to present the rationalist method no longer as an aesthetic outcome but as something that extended to more different moments of the construction cycle. Within this perspective, the authors perform an enormous census, cataloging and analysis of European, especially German, projects, highlighting the great synergy, characterized by a scientific and professional system present within the decentralized policies of the regions which will find its theoretical peak in the Bauhaus of Dessau. The design intentionality of these analysis consists in showing the large scale as well as the construction detail. Regarding public housing, some authors state: "We do not think that the character of public housing should only reside in economic factors... An house, in its immediate "order" expression, arises from moral and immutable needs, therefore, initially, the "social conditions" is neither a necessity nor a constraint: there are only initial distributive and collective issues, and their particular details may vary, which must maintain their character as an unitary solution" [Guenzi 1993, p. 204].

Among the most problematic aspects of social housing, Diotallevi and Marescotti underline sanitary conditions as the most important. Through social analysis, derived from the European progressive current, they highlight how precarious hygienic conditions influence people's life, and also mortality, relating how the accommodation, or better, the domestic condition linked to it, influences the social characteristics of a community. No less important is the study of the urbanistic phenomenon and its relative overcrowding, criticized for its speculative principle of putting as much "human mass" as possible in limited sized areas.

According to the authors, the urbanistic phenomenon allows a programmatic plan view; aware of this, they dedicate a big part of their writings to social housing and their future perspectives. On the other hand, new possibilities were showing up in those years with the growing decision-making autonomy that the "Istituti Autonomi per le Case Popolari" were acquiring; those Institutes allowed more room for improvement, arising from the willingness to operate in much bigger lots for social housing project, compared to the past [Guenzi 1993, p. 206].

Last in chronological order is the Manuale dell'Architetto by Mario Ridolfi, compiled by the CNR in 1946. This is presented by the author as "an Architect's Manual which in limited space contains the greatest amount of information useful for planning [...] especially urgent in view of the vast program of work that awaits all the Italian construction workers in the reconstruction work" [Guenzi 1993, p. 216].

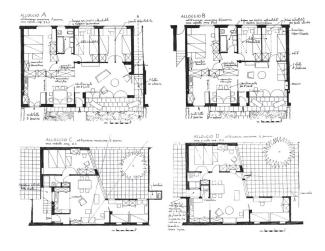
In the Manual, Ridolfi shows his previous experiences gained in contact with the German world and late rationalism, not only Breymann and Neufert, but the most in-depth experience in the field of Klein and Hilberseimer on public housing. The Manual is based on maximum practicality and clarity, it provides cards that favor the graphic aspect together with the use of tables and schemes in accordance with the new instances of representation then developed within the manuals linked to constructive empiricism in America. Developed with rationalist, organic and local Italian contributions, the Manual finds its validity precisely in being, as desired by its promoters, a useful tool and non-abstract guide in the process of rationalizing the building product also through the attempt to normalize many details constructive. The innovation that the Manual brings is in the rational and realistic control of the project in relation to the construction processes available suitably optimized. A concrete vision that interfaces with the reality of the construction site, a tool to guarantee procedures and techniques that can have immediate feedback.

After the great season of the manuals of the end of the 19th century, which was the moment of transition between historical treatises and modern manuals and which finds its best known and widespread implementation in the Italian Manuale dell'architetto by Daniele Donghi [Donghi 1905], they are positioned as bridges between the old and the new school.

Griffini's manual analyzes the problems posed by progress in the study of the home and tends to place itself in an anticipatory attitude towards the future of architecture. Diotal-

Fig. 6. G. Vaccaro. Terraced houses. Plans of the four types of lodging (Moschini 1982, figg. 11, 12, 13, 14, pp. 56, 57, 58, 59).

Fig. 7. G. Vaccaro. Terraced houses. Axonometrics (elab. Stefano Dell'Aria).



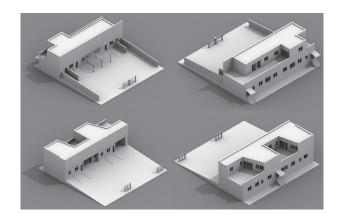
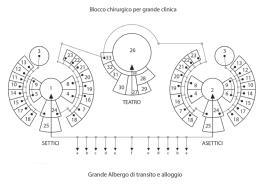
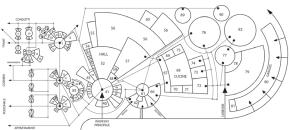


Fig. 8. G. Vaccaro. Diagrams for the planning (Vaccaro 1933, pp. 22, 46).





levi and Marescotti, on the other hand, have the advantage of setting in motion a colossal machine for cataloging and analyzing data, with the only flaw of establishing a very large database that tends to document technologies of limited use in our country; the opposite case is the Ridolfi manual which seeks to recompose the relationship between the project commitment and the experiences gained from our construction practice.

These manuals can organically be considered, within the Italian framework, three fundamental experiences for the development of the public housing in the post-war period, because they propose aspects and experiences that will transversally integrate the new visions of the themes elaborated between the two wars, from the point of theoretical, technical-constructive and graphic view. The common value that these publications have had is that of having formed a new humus of experiences and references capable of creating a new class of professionals who faced a new wor-Id changed by needs and necessities, and which found in the study of the house, from its urban size to that of the construction detail, an inevitable testbed for understanding the new dimensions of architecture. "The manuals, which, unlike the treatises, is based on a 'Theory of architectural design' and tends to constitute technical knowledge, capable of implementing and controlling construction practices. Just as the treatise uses significant analogies very often —and not only at its origins- so the manual, by exemplifying, shaping and offering a paradigmatic system, classifying and logically ordering its elements. [...] a clear systematic logic is found in the latest manuals: that by Neufert and that by Ridolfi and that -beautiful- by Irenio Diotallevi and Franco Marescotti'' [Ugo 1994, p. 151].

In short distance from Diotallevi-Marescotti's publications two writings by Adalberto Libera and Giuseppe Vaccaro were published in 1943. The first is Per la carta della casa in which the authors recognize the great value of the analytical work carried out by Ridolfi thus recognizing its educational value [Libera, Vaccaro 1943a, p. 12]; in it the analysis conducted by Libera on the home address, with a rich graphic production, every aspect of the problem: from the minimum scale of the fixtures and furnishings of the kitchen and bathroom to the planimetric schemes of the neighborhood unit. "Unlike his friend Libera, who between 1943 and 1945 will redirect his research with a ruthless act of removing past experience, in no condition Vaccaro reaches, in fact, 'to the point of forgetting architecture' just compare, in this regard, the constellation of signs as depersonalized and objective

as possible' that characterize the typological studies of Libera with the clear image offered by the overlapping terraced houses [...] rightly defined by Ponti as 'an architectural invention''' [Mulazzani 2002, p. 12].

The second essay published on Architettura Italiana with the title Per un metodo nell'esame del problema della casa [Libera, Vaccaro 1943b], reconnecting to the theme of the mass-produced house, investigates the technical and aesthetic aspects. Both texts are of great importance because they are fundamental in the approach to the theme of the public housing and because they highlight the backwardness of our country with regard to studies on residence, industrialization and series production, aiming for a precise method that goes from the analysis of functions to that of the elements of the accommodation. The two texts can be seen as a premise, or better as an integrative tool, for understanding the manuscript of Vaccaro Studi d'abitazione. La casa di serie [Moschini 1982]. In fact, among the personalities described so far, Vaccaro represents one of the most sensitive and attentive designers on the issues of the house; the notes elaborated on the housing problem, with the intention of publishing them after the conflict, are a profound reasoned reflection on the basis of what is described above.

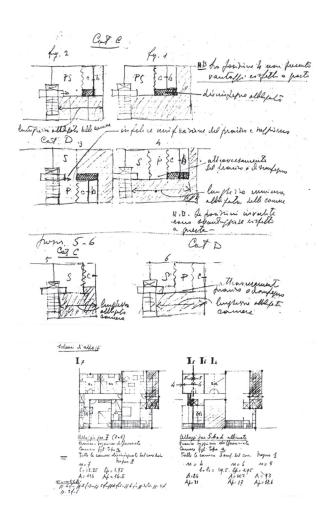
Vaccaro, faithful to his pragmatic spirit, shows, in fact, very shrewd and far from idealistic naivete, well understanding the relationships that are established between politics and operators and within the latter group the inevitable need to distribute specific skills regarding the various aspects of the project. This vision cannot but be the natural conclusion of considerations made not only on the basis of one's personal experiences, but in them we can see the echo of European experiences most likely acquired also thanks to the contribution of the authors who made up the history of Italian manuals.

The manuscript of Giuseppe Vaccaro

The Bolognese architect's manuscript was drawn up between 1940 and 1942, but this cannot be defined exactly as the dating cause the time period is obtained from an annotation placed on the file, present in the Vaccaro archive, which contains the drawings.

It can be considered unique in the work of Vaccaro, an architect who was always reluctant to put the theoretical component of his business on black and white. Indeed, in this sense the manuscript must be interpreted differently; in fact,

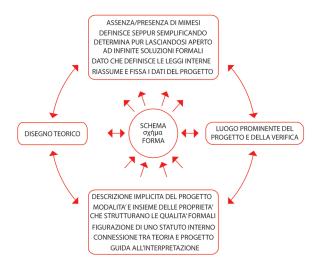
Fig. 9. G. Vaccaro. Diagrams of the lodgings for the multi-storey building (Moschini 1982, figs. 18, 21, pp. 64, 66).



it does not present any aesthetic-conceptual orientation, nor does it use the style of the poster, but rather outlines itself as a proto-manual, thus remaining in line with Vaccaro's attitude towards the conception of the architectural problem divided between practical and aesthetic. The strategies found in it are probably the result of first-person experiences and theoretically acquired by the architect throughout the period of the 1930s, a decade in which he participated in the elaboration of PRG (general urban development plan) and the design of areas for public housing. Perhaps even more important, and certainly not to be overlooked in the formation of a thought on the theme of the mass production houses, are the years preceding the war, those of theoretical comparisons with Libera on the theme of the house; in fact they publish together Per un metodo nell'esame del problema della casa [Rossi 1989, p. 8].

This article fills the gap in Vaccaro's small manuscript by presenting a series of theoretical and programmatic reflections that find no place in the latter. In the article, the authors place firm points on their concept of mass production, arguing that it is necessary to evaluate and reorder all the experiences acquired and to know at that point to organize their exploitation. Under the guidance of

Fig. 10. Graphic elaboration of the concept of scheme (elab. Stefano Dell'Aria).



the State, projects that aim at the highest quality based on the stage of studies achieved, studies carried out not by an elite of architects, but with a group of specialists ready to give their contribution both from the design point of view and from the implementation-industrial one; in practice, they propose a series of active figures for the realization of these projects in order to make their construction as speedy as possible in the now devastated post-war scenario. At the end of the article there is a reflection on the aesthetic problems arising from mass production: Vaccaro argues, in defense of this, that the accusations made by official culture to the average aesthetic quality of public housing is due to the fact that until then no one had dealt with the topic in depth. From a literary point of view, the manuscript is elaborated with an essential style and works in an attempt to reach concrete solutions without seeking the apology of the result, proposed as the most rational and coherent possible in relation to the problems faced; it is rarely propagandized in the terminology and in the emphasis, the treatment remains constantly adherent to the topics covered without granting disquisitions on collateral topics.

Giuseppe Vaccaro, giving concrete form to his thought, proposes in the manuscript a sort of garden city consisting of a parallel terraced houses system with four types of accommodation (fig. 3) and also, but not with the same depth, multi-floor buildings.

The representations contained in his notes are divided into clear and evident 'representative categories': sketches, diagrams, plans and detailed insights (figs. 4, 5).

Vaccaro completely omits the use of axonometry by referring the description of spatial intuition to perspective and orthogonal projection; this sort of renunciation is a constant in Vaccaro's work which allows us to glimpse the coherence of his training path characterized by the preference for forms of representation that most likely derive from his training.

Vaccaro's notes refer, from the beginning of the manuscript, to an evident and necessary industrialization understood as an "urgent necessity in which it is legitimate to see the possibility of a vast contribution to the diffusion in the masses of the benefits of civilization and social justice, and also the possibility of reaching in form a harmonious and true expression of our time" [Moschini 1982, p. 8]; further on, the Bolognese architect expresses the concept more clearly by specifying that "the unification of the types of elements implies the determination of the corresponding types of housing intended as 'assembly schemes' of the ele-

Fig. 11. Excerpt from a table by Alexander Klein (Guenzi 1981, Fig. 1, p. 193).

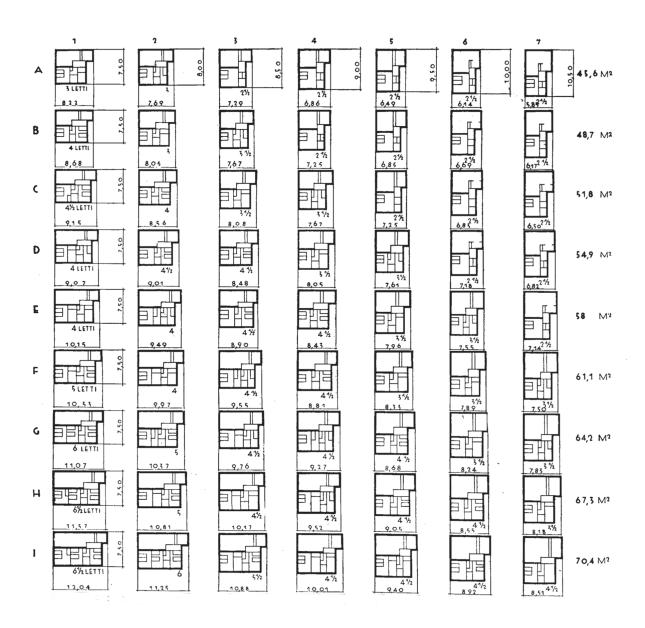
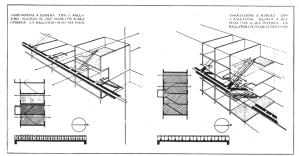


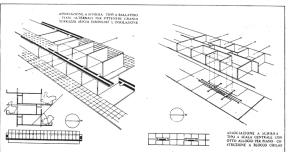
Fig. 12.1. Diotallevi and F. Marescotti. "Housing association". Plans, sections and perspective schemes of cell aggregation according to different solutions. (Guenzi 1981, Fig. 1, p. 203).

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ments themselves. These 'assembly schemes' represent the 'complete mass production house'' [Moschini 1982, p. 9] (figs. 6, 7).

The scheme in Vaccaro's work

Giuseppe Vaccaro, a tireless author who is always directed to a pragmatic vision of designing, senses and develops in his personal design experience elements that will be proper to the cosmogony of the rationalist universe; elements constituting the basis of the thought and history of the movement such as the social housing, the existenzminimum, functionalism, mass production and manuals.

In the manuscript, attention it is devoted to a particular element of the paradigm of architectural culture, which in its contemporary graphics conceptual connotation is also a child of the rationalist culture. The "scheme", an element to which Vaccaro himself dedicates a small book in 1933. Schemi distributivi di architettura, in which this 'conceptual' representation is taken as an essential help and guide to the design: "to summarize and fix in a synthetic and immediate form I perceive all those objective data of the project, which come from preliminary recognition in the special field of science and human practice that affects the particular building case; and also those data which —although coming from his personal science and experience— can be objected to as essential study cornerstones. A well-traced distribution scheme will make this choice technically safe, even among the imagination of the invention; which in turn can develop serenely without the constant concern of tracing some scattered practical constraint which it must also obey" [Vaccaro 1933, p. 37 (fig. 8).

He is a supporter of this tool and it can also be clearly seen from the amount of diagrams present in the manuscript which are a significant part of the graphic section (fig. 9). In fact, in the small volume of 1933, Vaccaro wrote that thanks to the scheme the architectural solution will be: "straightforward and harmonious of the problem; during the study of it, it is not the overwhelming a priori aesthetic synthesis (inevitable in any true artistic temperament), which mutilates —ahead of it— the functional integrity of the factory; nor the constant concern of tracing the parameters of this indispensable functionality, to compromise that unity and freshness of the architectural creation that already characterized the masters' work. Sometimes the functional scheme —constituting an equal compendium of typical bu-

ilding needs— cannot be fully applied in the actual project; but it will then allow a safe and reasoned choice of renunciations, according to a clear hierarchy of the importance of the elements of the factory with respect to its financial and space economy" [Vaccaro 1933, p. 6]. Vaccaro underlines how the tool of the scheme is the result of contingent needs of the twentieth century, since the quantity of data, which has increased enormously compared to the past, is inevitably destined to a schematization in order to obtain 'rationality' and 'functionality'.

The Bolognese architect implies the importance that the scheme assumes in modern architectural culture, an importance that authors such as Vittorio Ugo not by chance relate precisely to Klein's studies and to the manuals between the two World Wars where the scheme «assumes its own autonomy and a significant role of mediation and synthesis between thinking and building» [Ugo 1994, p.108].

The word "schema", deriving from the Greek $\sigma_X \dot{\eta} \mu \alpha$ [skhèma] and is one of the many possible words of the Greek language with which the word form [Ugo 1987] can be translated. This leads to interesting considerations as the scheme in this case underlies the image of the building; the concept of image is strongly connected to mimesis but nevertheless the scheme detaches itself by binding to the geometric-conceptual value of the form.

In agreement with Ugo's theoretical positions, the scheme is stripped of the functional aspect only by entering the 'implicit' description of the project; genetic material of the work itself, underlying aesthetic conjugation, potential and revealing of the origin of the project. In fact, the scheme is not assimilated to any of the canonical 'projective' representations, it does not attempt, through the codification of the graphic-projective language, to return the object's mimesis, but refers to a series of knowledge that are at the basis of the design. A scheme does not represent a particular building but all that structures it. It is a figuration of an internal statute that may not manifest itself if the study is of a purely theoretical-graphic nature or can manifest itself in infinite variations, as Vaccaro also suggests. "A design problem —even if determined in its objective data— is still a problem with infinite solutions. It will be the subjective (technical and artistic) interpretation of the distribution body summarized in the functional scheme, what will discriminate between the possible solutions" [Vaccaro 1933, p. 4]. The scheme represents a binary moment of the project: in the visualization it declares a reading code, a practical guide to interpretation. On the other hand, in the sphere of thought it is theoretically, if not philosophically, referring to the positions of thought in a concrete way with all its articulations and organizations. Thus defined, the scheme rose in the past century as an ideal instrument of the functionalist-rationalist school (figs. 10-12).

Thus ends, also with Vaccaro's work, the era of the example, of the only compilation presentation of projects in succession, of the scheme sought above the real data; the systematic use of the scheme revolutionizes the genesis of the project. It is no coincidence that Klein's theories and studies are largely based on the usefulness of the scheme as a useful tool for the designer, becoming a paradigm of the design method, the cornerstone of a theoretical system that is based by analogy precisely on the theoretical system which manifests itself in the graphing of the schemes. A position shared by Giuseppe Vaccaro who, in line with his professional character, senses its great practical utility for the purposes of the profession by arguing the advantages that the architect can obtain from his rational use during the design process.

Credits

While sharing the positions expressed in the article, the result of common elaborations, the paragraphs: Introduction, *The public housing between the two World Wars. Brief history of manuals*, and *The manuscript of Giuseppe Vaccaro* are to be attributed to Francesco Maggio, while the paragraph *The scheme in Vaccaro's work* is to be attributed to Stefano Dell'Aria.

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References list

Baffa Rivolta, M., Rossari, A. (1975). Alexander Klein. Lo studio delle piante e la progettazione degli spazi negli alloggi minimi. Scritti e progetti dal 1906 al 1957. Milano: Gabriele Mazzotta Editore.

Diotallevi, I., Marescotti, F. (1941). Ordine e destino della casa popolare. Milano: Editoriale Domus S.A.

Diotallevi, I., Marescotti, F. (1948). *Il problema sociale, costruttivo ed economico dell'abitazione*. Milano: Poligono.

Donghi, D. (1905). Manuale dell'architetto. Torino: Utet.

Griffini, E.A. (1931). Costruzione razionale della casa. Milano: Hoepli.

Guenzi, C. (a cura di). (1993). L'Arte di edificare. Manuali in Italia 1750-1950. Milano: BE-MA Editrice [Prima ed. 1981].

Libera, A., Vaccaro, G. (1943a). Per la Carta della Casa. In *Stile*, n. 30, p. 12.

Libera, A., Vaccaro, G. (1943b). Per un metodo nell'esame del problema della casa. In *Architettura Italiana*, n. 5-6, pp. 36-45.

Maggio, F., Villa, M. (2008). Architettura demolita. Modelli abitativi alla VTriennale di Milano. Ridisegno e analisi grafica. Palermo: Caracol.

Moschini, F. (a cura di). (1982). Giuseppe Vaccaro. La casa di serie. Appunti sull'abitazione 1940/1942. Roma: Edizioni Kappa.

Mulazzani, M. (a cura di). (2002). Giuseppe Vaccaro. Milano: Electa.

Ridolfi, M. (1946). Manuale dell'architetto. Roma: CNR Usis.

Rossi, P.O. (1989). La "casa per tutti". Un tema di riflessione per gli architetti italiani degli anni della seconda guerra mondiale. In ArQ, n. 2, pp. 23-37.

Samonà, G. (1973). *La casa popolare degli anni '30*. Padova: Marsilio. [Prima ed. La casa popolare. Napoli 1935].

Ugo, V. (1987). Schema. In XY, n. 3, pp. 21-32.

Ugo,V. (1994). Fondamenti della rappresentazione architettonica. Bologna: Ed. Esculapio.

Vaccaro, G. (1933). Schemi distributivi di architettura. Bologna: Maylender.