The Responsibilities of the Architect: Mass Production and Modernism in the Work of Marco Zanuso 1936-1972

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ABSTRACT

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The topic of this dissertation is the significance of industrial design in the work of architect Marco Zanuso (1916-2001), who lived and practiced in Milan, Italy. As a leading architect, as well as a pioneer in industrial design in the early postwar period, Zanuso was a key protagonist in the relationship of postwar Italian architecture culture to industrialization and capitalism. He is therefore an indicative figure with respect to the broader shift from Modernism to Postmodernism in architecture. Whereas previous studies of Zanuso have addressed either his architecture or his industrial design, this study traces the mutual influence of these practices in Zanuso's early work. The four chapters examine a selection of his projects to reconstruct their relationships to concurrent discourses in Italian art, architecture, and industry. In addition, the chapters show how these projects can be understood as conceptual and practical benchmarks along the way to the eventual realization of a continuum of design from small to large scale, and especially an architecture in which the serial nature of mass production would be explicit.
The first chapter, whose topic is Zanuso's relationship to Italian modern architecture between the two World Wars, relates his embrace of mass-production around 1946, in essays on prefabricated architecture, to his student work in the 1930s and to his first projects during Reconstruction, emphasizing the influence of the Gruppo 7, Giuseppe Pagano, and Ernesto Nathan Rogers. The second chapter, whose topic is architecture and art, looks at Zanuso's mural-covered Viale Gorizia building and other projects, and at his involvement in the "synthesis of the arts" discourse with adherents of the Italian arte concreta ("concrete art") movement, including Gillo Dorfles, Mario Ballocco, Bruno Munari, and Gianni Dova. The third chapter identifies the mass-produced apartment complexes on Via Laveno (1963) and Via Solaroli (1965) as Zanuso's first realized examples of industrial architecture, and places these in the context of the broader assimilation of industrial production methods by artists and architects in Milan around 1960. In addition, the third chapter examines the portrayal of Zanuso in the press in relation to the emergence of the architect-designer as a public figure in Italy and the identification of the industrial product with consumerism. The fourth chapter, whose topic is Zanuso's association with Olivetti, considers his factories for the company, designed between 1953 and 1972, in relation to the corporate program conceived by Adriano Olivetti, with Leonardo Sinisgalli and others, to intercalate rational design and planning into the fabric of civic and social life, from the object to the territorial scale. By scanning Zanuso's early work through these topics, this study
demonstrates that he drew imperatives from various sources. These investigations show that his industrial design practice proceeded in tandem with his incorporation of production into architecture, in keeping with his longstanding ideas about the architect's responsibility to maintain civility in the use of technology.

The argument of the dissertation is that, while Zanuso's interest in design reflected a wider fascination with technological capacities, it was also a means by which he gained access to practices of mass production that he went on to apply to architecture and interiors as well as to furniture and appliances. Through the examination of his projects and archival documents, the chapters demonstrate that Zanuso's work belies the often-repeated generalization that Italian industrial design was a reflection of the consumerism and commercial culture that arrived in Italy after the War, and overtook Milan during the 1960s.
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To modern architecture.
INTRODUCTION

Marco Zanuso (1916-2001) was an Italian architect who practiced in Milan. He was educated during the 1930s, but his first buildings were realized after the Second World War. Zanuso was also an industrial designer whose furniture, televisions, and other objects were among the first to be mass-produced in Italy. In the literature on Zanuso to date, he has been recognized as an architect and as an industrial designer, in surveys of the buildings and industrial design projects for which he is widely known. However, no study as yet has attempted to articulate the relationships between his architecture and industrial design. The goal of this dissertation is to begin to articulate that relationship. The purpose of this introduction is to indicate the wider historiographic framework in which the chapters will work toward that end, and the method by which it will do so.

The span of Zanuso’s career, from the end of the Second World War to the late twentieth century, includes both the period when Italian modern architecture was predominant, and the postwar period, when critiques of modern architecture grew stronger and architecture developed in various stylistic directions. In this respect, Zanuso occupies a distinctive position on the edge of the Modern Movement. Indeed, more than one survey of Modern architecture that appeared after the War mentioned Zanuso as a young rationalist architect. The architect Piero Bottoni, an early and prominent adherent of Rationalism, included Zanuso’s Office Building on Via Senato (1947,
designed with Roberto Menghi) and his Apartment Building on Viale Gorizia (1951), in his 1954 guide book to modern architecture in Milan.\(^1\) Zanuso also appeared in two surveys of Italian architecture in the mid-1950s: Carlo Pagani's *Italy's Architecture Today* (Milan: Hoepli, 1955) and in G.E. Kidder Smith's *Italy Builds* (Milan: Edizioni di Comunità, 1955).

However, in the late 1950s, Zanuso was also singled out as an example of young architects confronting the postwar situation, as critics in Milan began to confront the problems that had faced the architects who had tried to carry modern architecture forward in that city, since 1945. In an article published in *Casabella-continuità*, the architect (and an assistant editor) Vittorio Gregotti described Zanuso as an exemplary member of a "second generation" of modern architects in Milan, which appeared to have been drawn into habits of practice that were conditioned by the city's rapid urban development.\(^2\) According to Gregotti, this group included Ettore Sottsass, Roberto Menghi, Vito and Gustavo Latis, and Achille and Pier Giacomo Castiglioni, in


addition to Zanuso. Gregotti described this group as bold experimenters influenced by Rationalist ideals from between the wars. Their work was varied in its appearance, and their research typically extended into art, furniture design, and design for mass production. Gregotti saw their work as indications of the architect’s problematic status in Milan, where developers who participated in the postwar construction boom were often content with simplified forms of the modern style, and architects had to compete for work with draftsmen, but aspired to be equal to the architects that had come before them. He expressed admiration for their determination to find a new direction for architecture, and he praised Zanuso for the spirit in which he had turned to the design of building structure as a means to maintain aesthetic control.

In his discussion of Zanuso as an exemplary architect of the second generation, Gregotti did not neglect to mention Zanuso's involvement in industrial design. He wrote of Zanuso's confrontation

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3 The exact roster of the "second generation" varied. Guido Canella, writing in 1963, would echo Gregotti, specifying that they were "born between 1915 and 1925." [Guido Canella, "Zanuso il più problematico degli architetti italiani" Fantasia la rivista della Donna, November 1963, 62, 64.] Carlo Perogalli would refer to all Italian Rationalists as "Second Generation," including not only Zanuso's peers who graduated from the Milan Polytechnic in 1939, but also Piero Bottoni, who had graduated in 1925. Perogalli would distinguish this group from a "first generation" that included Gio Ponti, Giovanni Muzio, and Piero Portaluppi, who had established their practices before the advent of Rationalism. [Carlo Perogalli, "Architettura, Ambiente, Sintesi Artistica nella Milano Post-Bellica." In Aspetti Problemi Realizzazioni di Milano Raccolta di scritti in onore di Cesare Chiodi (Milan: Dott. A. Giuffre' Editore, 1957), 413-19] In keeping with this loose definition, other architects sometimes assigned to this group were Mario Righini; Gianemilio, Pietro, and Anna Monti; Gianluigi Giordani, Vittorio Gandolfi, Carlo Pagani, and Vittoriano Viganò.

4 Gregotti, "Un architetto della seconda generazione," 60.
of "production for the market": "For him," Gregotti wrote (about Zanuso), "a seat and an armchair are not cultural endeavors but products for the market, in the active sense of the word, elements of a link to the world of production in which, in spite of everything, there are still possibilities for improvement, that must be individuated."\(^5\)

As architects who were motivated by the priorities of modern architecture, but also driven to find a new path for architecture and presented with unanticipated challenges in order to do so, Zanuso and his peers were like many other architects in postwar Italy. Various departures from the strictly unadorned surfaces, the grid, the use of white stucco walls and regularly spaced windows that characterized Italian Rationalism, parallel to the "new architecture" or "Neues Bauen" in Switzerland and elsewhere in Europe can be seen in Italian architecture of the 1950s. Some of these were emphatically based on form, such as Pier Luigi Nervi's intricate large-scale structures in reinforced concrete, or Luigi Moretti's designs with textured materials, angular geometry, and bent and inflected wall planes, as observed in his "Casa del Girasole" building in Rome, of 1952.\(^6\) The public housing programs that attended Reconstruction, or were built in the 1950s, offered opportunities for architects to continue in the vein of the 1930s or to test different kinds of alternative. QT8, the quarter built on the edge of Milan and named for the eighth Milan

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5 Gregotti, "Un architetto della seconda generazione," 60.

Triennale, provided one such occasion. A group of architects, of which the most widely cited were Carlo Aymonino, Mario Ridolfi, and Ludovico Quaroni, would test variations of vernacular forms for public housing, in the style that would be known as "Neorealism." 

During the early 1950s, Marco Zanuso was close to Ernesto Nathan Rogers; he served as assistant editor under Rogers's direction at Domus (from 1946-1947) and again at Casabella, after Rogers assumed the direction of that journal starting in 1954. Rogers renamed the journal "Casabella-continuità," and through his editorials he pursued the theme of "continuity," which involved forging ahead with architecture in a way that would maintain close ties with the past. 

"Continuità," with its overture to the study of history, was among the more complex literary projects in which Italian architects probed for

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9 Ernesto Nathan Rogers, "Continuità" (1954). Reprinted in Esperienza dell'architettura (Milan: Einaudi, 1958), 130-3. This first editorial appeared in Casabella-Continuità 199; the other editorials are also included in the 1958 anthology.
a new architecture during the 1950s. Rogers's own Velasca Tower (1957), a tall building with a castle-like fortification at the top designed with his partners in BBPR, can be understood in light of that program.

While Zanuso was closely associated with Rogers, he was not involved in Rogers's theoretical project. He specialized in the theme of technology in his role as an editor of Casabella-continuità, much as he had at Domus. Yet Zanuso does appear to have shared the general attitude of seeking a line of research through which to advance architecture along the path marked out by the Modern Movement, in a manner that would respond to the postwar atmosphere.

This study will evaluate the hypothesis that for Zanuso, industrial design was partly a means to move architecture forward. More precisely, he was interested in practicing design and learning the methods of production, in order to bring that understanding to his architecture. Zanuso did not advance his ideas in theoretical writings, unlike Rogers; but Zanuso's remarks on various themes, recorded in transcripts and short articles, offer occasional insight into his point of view. An example is a brief remark about the architect as designer, published in Stile industria in 1962.

In my opinion . . . design and architecture have a common root that is the modern movement. Design is an experience with a basis in production and . . . along with negative aspects, it has the distinction of a more lively expression of the world in which it

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10 Other projects in the theory of architecture, of a comparable cultural aspiration, included Luigi Moretti's journal Spazio, Leonardo Sinigaglia's Civiltà delle Macchine, and Bruno Zevi's Metron and L'Architettura cronache e storia.
develops . . . architecture by contrast is far from the modes of modern production and from them has not he been able to, or known how to, collect all these values of content from which it could find its proper way of expression.11

Zanuso implied that if the aim of the modern movement had been to give expression to modernity in the world, then design—being more closely connected to production than architecture—was closer to the modernist agenda than architecture was. By engaging in industrial design, an architect could draw closer to production, and to the intentions of modern architecture.

This study focuses on Zanuso's development of an industrialized architecture—buildings designed by means of mass production, or in which production is in some way a theme. The principal timeframe considered includes his first professed interest in prefabrication, in 1946, and his realization of buildings that address the theme of industrialized architecture, in the 1960s. To place these in context, the study includes the late 1930s, when Zanuso was a student in architecture school and the Modern Movement was at the height of its power in Italy; and the late 1960s, when the general attitude to modern architecture had shifted, and Italian design figured prominently in the criticism of architecture.

As Zanuso observes, design and architecture had once been considered, together, as aspects of the modern movement. The historian Nikolaus Pevsner had considered design and architecture on a spectrum

11 Marco Zanuso, in Alberto Rosselli et al., "La responsabilità degli architetti" Stile industria 36 (1962):25. (English quotations of Italian texts are my translations except as noted. In cases of paraphrase, passages in original language are appended to the citations.)
in *Pioneers of Modern Design* (New York: Museum of Modern Art, 1949), a history of the modern movement that included design and architecture under the same term, beginning with William Morris and the English Arts and Crafts movement, and including the Bauhaus. Reyner Banham offered a different account of the modern movement, but affirmed the relevance of design, in *Theory and Design in the First Machine Age* (1960). But architecture and design had also tended to be regarded as distinct domains. Banham was a supporter of design and an advocate of design as an occupation, but he argued that architecture was a separate discipline and maintained that architects should not attempt to work as industrial designers.

This distinction was ignored by many Italian architects who were also noted industrial designers, including Gio Ponti, Roberto Menghi, Alberto Rosselli, and others, as well as Zanuso. Industrial design was held in sufficiently high regard in the early 1950s that a section on industrial design was included in "L'Italie," a special issue of *L'Architecture d'Aujourd'hui* devoted to the Italian architecture scene. Industrial design had its own section at the Milan Triennale.

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12 For instance, in his introduction, Banham argued that new cars, airplanes, and appliances "were the essential propellant that launched the Modern Movement on the triumphant trajectory that has left the theory and design of architecture permanently and irrevocably changed." Reyner Banham, *Theory and Design in the First Machine Age* (Cambridge: MIT Press, 1980), 10.

13 Banham, Reyner. "Design by Choice" *Architectural Review* 773 (1961): 47. Instead, Banham advised the architect "to exercise choice and background control over the choice of others, to advise, suggest and demand on the basis of knowledge and understanding." Ibid.

from the mid-1950s onward, including the exhibition on "Art and Production" to which Zanuso, who was an organizer of Triennale X (1954), gave a prominent position in the exhibition layout.\textsuperscript{15} In 1972, Italian design would be the subject of an exhibition at the Museum of Modern Art in New York.\textsuperscript{16}

Nevertheless, in the critical literature on Italian architecture, by the late 1960s, design was associated with the commercial aspect of architecture, and with its commodity aspect. In one article, the critic Paolo Portoghesi, writing in the left-wing architecture journal \textit{Controspazio}, described an "architectonic condition" in Milan, and implied that the architect who designed products fueled not only production but also the rampant construction that was changing the urban landscape.\textsuperscript{17} To Manfredo Tafuri, design was a field through which the designer might try to intervene in the workplace or the domestic environment, but in his view, the practice of design by Italian architects, up to 1972, had provided architects with a means of escape or distraction from the problems facing contemporary architecture, rather than a solution to them.\textsuperscript{18}


\textsuperscript{16} The exhibition was held in May-September 1972. See the exhibition catalog: Emilio Ambasz, \textit{Italy: the New Domestic Landscape} (New York: Museum of Modern Art; Florence: Centro Di, 1972).

\textsuperscript{17} Paolo Portoghesi, "L'occhio vuole la sua parte" \textit{Controspazio} (Jul-Aug 1969): 7-23.

As the chapters of this study will show, the diversity of Zanuso's experiences belies the idea that his practice can be understood only in terms of the notion that industrial design practice brings the architect closer to the field of production; and that the techniques of production lend themselves to the advancement of modern architecture. However, from that idea, this study has drawn a series of questions through which to probe the status of production and modernism in Zanuso's work. Is it possible to place his achievements in relation to an originary point of contact with modern architecture, as is suggested by his remarks about production? If so, what was the iteration of the modern-architecture agenda that he knew? How did the transfer of industrial design methods to architecture take place; and in what ways are the traces of these methods, or the intentions of that movement, intelligible in his work?

The existing monographs on Marco Zanuso offer various concepts as aids to understanding his work. Gillo Dorfles, in *Marco Zanuso Designer* (1971), portrayed Zanuso as primarily a designer, but considers Zanuso's factory buildings as industrial design objects, portraying the module to a large object that can provide enclosure. The idea of the "object-type" for mass production was proposed by François Burkhhardt, in the essay in his monograph, in *Marco Zanuso Designer* (Rome: Editalia, 1971).
(1994), which focused on Zanuso's furniture and objects, and portrayed his contribution in design as a set of typological proposals. The relevance of the "Produktform," a concept from the work of Max Bill, was proposed by Kenneth Frampton in his contribution to Marco Zanuso, Architett (1999). The Produktform concerns the elaboration of the form of the object in a manner consistent with the way it is made, and Frampton remarked on the resonance of this idea not only with Zanuso's products but also with the tectonic sensibility that is evident in Zanuso's factories. The concept of "well-being," proposed in the anthology Marco Zanuso: architettura, design e la costruzione del benessere ("architecture, design and the construction of well-being") (2007), points to a common intention among Zanuso's buildings and objects, however this may have been addressed at one or another scale.

The present study is the result of an attempt to discover concepts within Zanuso's work. François Burkhardt, in his monograph on Marco Zanuso's industrial design, laments the relative anonymity of Zanuso in the literature of architectural history, advising the student who seeks to learn more about Zanuso to "refer to a series of articles and publications which appeared in specialist magazines, as the existing encyclopedias and histories of architecture fail to mention his name." The literature on Zanuso has been enlarged since


Burkhardt made that observation, in 1994, but that method has been followed here. The chapters are constructed largely from materials consulted in the Fondo Marco Zanuso (Marco Zanuso archive), at the Archivio del Moderno in Mendrisio, Switzerland. These materials include drawings (some of them consulted on a set of microfilms prepared by the Zanuso office) and a selection of Zanuso's writings and speeches. But many of the articles about Zanuso, cited in this study, were held in his own collection of hundreds of articles about his work. Among these are several issues of the journal Stile industria, which documented the Italian design scene from 1954-1963, and has so far occupied a peripheral status in relation to the history of architecture in the same period, despite the prominent role of several architects, including Alberto Rosselli, its editor, in its run.

In one sense, the focus of this study is Zanuso's projects; but the investigations of the projects considered are also concerned with the ideas that attended the projects—ideas about objects and their production, but also about ways of living with objects. By using primary-source literature, I have sought to reconstruct Zanuso's ties to concurrent movements and his affiliations with other protagonists in the Milan architecture and design scene, in the four chapters that follow.

Noting Zanuso's self-avowed affiliation with Italian Rationalism, the first chapter places his first articles on prefabrication, published in Domus la casa dell'uomo, in 1946, in the context of his
apprehension of a conception of the architectural work as a cultural symbol. His designs for the iconographic architectural repertoire of Italian Fascism, including the Milan Arengario (1936), Sacrario dei Caduti (1938), and Albergo Rifiugio (1938) are reviewed to demonstrate his relationship to debates in Italian modern architecture. In addition, this chapter observes Zanuso's studies of the house as a symbolic architectural form for a democratic Italy, in his "Ideal House" (1942), and Villa Scotti at Premeno (1946), and his interpretation of functional planning and prefabrication for this building type in La cucina (1945).

Following the lead of Zanuso's 1951 essay "Architettura e pittura" ("Architecture and Painting"), the second chapter examines Zanuso's Office Building on Via Senato (1946-1947), Apartment Building on Viale Gorizia (1951), and Showroom interior for the Società del Linoleum (1952), as reflections of the "Synthesis of the Arts" discourse in the Milanese art concret. This chapter also looks at the exhibition "Selected Examples of Italian Industrial Design" (1955), in relation to his contact with the contemporary discourse on "industrial aesthetics," and at his participation in the first program for industrial design in Italy, documented in the journal Stile industria.

Observing Zanuso's use of a prefabricated wall and framing system in the Apartment Complex on the Via Laveno (1963) and Via Solaroli (1965), the third chapter assesses these buildings as comprehensive examples of an industrialized residential architecture, and demonstrations of the influence of industrial design on Zanuso's
conception of the mass-produced house. These projects, along with the Zanuso Apartment (1962), are identified with two kinds of sensibility through which Zanuso reflectively confronted the aesthetic problem of mass-produced architecture in relation to the consumer market. In addition, the chapter takes note of Zanuso's relationship to publicity and the press, to his collaborations with furniture producers, and to his entanglement in the involvement of design in the press discourse on femininity, in particular.

Turning to Zanuso's buildings for the Olivetti company, the fourth chapter traces the development of an industrialized industrial architecture in Zanuso's factories at Buenos Aires (1959), São Paulo (1960), and Scarmagno, Crema, and Marcianise (1962-1972). By tracing the relationship of these buildings to Adriano Olivetti's social planning agenda and product design method, the chapter shows how the industrialization of architecture could be invested with symbolic value in the context of the communal ends of the corporate culture.
I admit my Rationalist formation and no longer run away from it. What I do not want to say, but is often said about Rationalism, is that it was a limitation. It is a bit like speaking of the Enlightenment, or the French Revolution, as a limitation. It is just a cultural formation that leads one to confront problems in a certain way.

—Marco Zanuso, RAI Interview

The first published evidence of Marco Zanuso's interest in the industrial production of buildings is the series of essays on prefabrication, co-authored with Paolo Chessa, which appeared in Domus la casa dell'uomo, in 1946. In an article published two years earlier, Zanuso had outlined the potential of mass-producing a room, the kitchen; in the 1946 articles, he addressed the production of an entire building, defending a set of criteria for the use of the module, the selection of materials, and the organization of the construction site.22 By the time Zanuso had seen the construction of the Villa Scotti (1946-1947)—designed with Giovanni Albricci and built by traditional means—he had also seen the first of his furniture designs put into production, in 1947 (his renowned "Lady" Chair); and

22 Marco Zanuso, "Non dimentichiamo la cucina" Domus 197 (1944): 183-188. Marco Zanuso, Paolo Chessa "La casa prefabbricata: il modulo" Domus la casa dell'uomo 205 (Jan 1946): 26-7; "La casa prefabbricata 2: i materiali" Domus la casa dell'uomo 206 (Feb 1946): 31-33; "La casa prefabbricata: il cantiere" Domus la casa dell'uomo 207 (Mar 1946): 17. (English quotations of Italian texts are my translations except as noted. In cases of paraphrase, passages in original language are appended to the citations.)
he had envisioned and advocated the industrial production of the whole house.

Zanuso and Chessa's essays on prefabrication were in keeping with the contemporary discourse on the rationalization of architecture among Italian architects, which had begun during wartime. Like other essays that had appeared in Domus, in the early 1940s, they outlined a proposal for the rapid construction of housing, noting the housing shortage in the wake of the War. Essays on this theme had extended the apprehension of new materials and technologies of construction that had been part of the discourse of Italian Rationalism, whose architects had pointedly embraced technological change in the choice of materials, elaboration of plans, and development of building types before the war.

However, Zanuso and Chessa made an effort to find an implicit cultural significance in industrial production. This is the ostensible purpose of the architects' references to chemistry, and their use of repetitive forms, microscope imagery, human hair and other familiar subjects in photographic illustrations of seriality in nature, which suggest an intention to present production in familiar terms. More than just an inexpensive solution to an urgent problem, mass production was presented as a step toward a further illumination of the world, a means to reproduce culture on a large scale by means of the home. The authors' conjunction of this cultural project with the technical matter of rationalized construction is close in spirit to

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the theme acculturation of technology that had characterized Italian Rationalism, which prevailed in Milan in the 1930s, while Zanuso was an architecture student.

The realization of the Villa Scotti (1946-1947), was the culmination of a series of projects for houses designed by Zanuso during the War and in its aftermath. Although it was not a mass-produced home, the Villa Scotti is an important concomitant to the announcement of Zanuso’s industrial agenda. If prefabrication appeared to Zanuso to represent the reproduction of culture, the Villa Scotti demonstrated his sensibilities for its design. To develop a domestic architecture that suited the postwar moment, Zanuso applied a set of sensibilities for the building as an architectonic symbol which he had acquired during the 1930s.

Zanuso’s capacity to invest prefabrication with the significance of a means of reproduction of culture can be linked to his experiences during the previous decade, when Italian architecture culture was bound up with the culture of Mussolini’s fascist regime, due to the predilection of Mussolini for intricately symbolic buildings. For several years in the 1920s and 1930s, architects debated the expression or concealment of technology in buildings. The administrative programs of the fascist regime included the organization of architects into a professional system, the first of its kind in Italy; and the convention of competitions for public buildings, which was a prominent feature of this system, had a galvanizing effect on these debates, and polarized the relationship of
Rationalism and Novecento, the two principal tendencies in Italian modern architecture during the 1930s.

The approach to architectural design that Zanuso would learn was influenced by his attraction to Rationalism, and to that movement's development in Milan, where cultural life was characterized by frequent exchange of ideas between architects and artists. In this atmosphere, painters, sculptors, and poets, among other cultural figures, contributed to the development of the Rationalist and Novecento agendas for the figuration of modernity through modern buildings. Architects collaborated with artists and graphic designers in the creation of public buildings and spaces.24

Zanuso's student work at the Milan Polytechnic between 1934-1939, and his projects published during World War II, would range in scale from a large institutional building for the regime to a sacred interior space, and from iconic public buildings to the private domestic interior. These projects suggest the distinct influence of particular architects and engineers, including Ignazio Gardella, Giuseppe Terragni, Ernesto Nathan Rogers and the firm BBPR, and Giuseppe Pagano. In addition, by the time he wrote his essays on prefabrication, Zanuso had been exposed to the cultures of technology in the military and the Resistance, as well as to the philosophical

theories of architecture developed by Rogers, reflecting Rogers's intense intellectual production while in exile.

Debates Over a National Architectural Style Under the Fascist Regime

The Milan Polytechnic that Marco Zanuso entered in 1934 was dominated by faculty such as Gaetano Moretti, who had maintained his position since the second decade of the century and had risen to the position of director in 1933, and Ambrogio Annoni, who taught a course on "organic" architecture. The instruction at Milan included history lessons from Annoni, lessons in the practice of architecture from Piero Portaluppi, instruction in interiors, in construction, and—after 1936—a course in urban planning taught by Cesare Chiodi, following the formation of an urban studies club at the school. Moretti, Annoni, and other instructors of Zanuso and his classmates, had been faculty at the school since the early 1900s. Their instruction in cultural and technical considerations of architecture would have been remotely influenced by the curriculum established by Camillo Boito in Milan, in the late nineteenth century, in addition to the priorities of the Regia Facoltà di Architettura (Royal Architecture School) which was established at Rome during the early twentieth century, and became the pattern for the standardization of architectural education in Italy, under Fascism.

25 Ezio Bonfanti, Marco Porta. Città, museo, ed architettura. Il gruppo BBPR nella cultura architettonica italiana 1932-1970 (Florence: Vallecchi, 1973), 13. The authors refer to the instructors in interiors and construction as "Fratini" and "Danusso" (most likely Cesare Fratino, the painter and set designer, and Arturo Danusso, the renowned structural engineer, who were professors at the Milan Polytechnic during the 1930s).
At least since 1870, there had been an impulse toward a national architectural style in Italy, and an argument over what that style might be (or must be), making explicit reference to the question of whether what was new in form, materials, or reference could properly be the basis of an authentic Italian style. In Fascist culture, this debate would acquire a particularly sinister tone when taken up by architects who were close to the more conservative elements in Fascist culture, after the 1920s, who made reference to the purity of the Italian race. But similar controversies had attended Italian attempts to absorb the Art Nouveau, around the turn of the century.26

Before 1920, there had been no architecture school, per se, in Italy. The normal course of training for an architect was instruction in architectural drawing at a fine arts academy, followed by a course in construction. The first architecture school, the Regia Facoltà di Architettura, was founded at Rome only in 1919, based on a curriculum designed by Gustavo Giovannoni and Marcello Piacentini, with a strong urban sensibility and reflecting the influence of the Viennese architect Camillo Sitte. In Milan, architecture had been taught as a specialization at the Polytechnic, part of the civil engineering program. The development of the discipline, parallel to developments in Rome, had been substantially the work of the architect Camillo Boito. As an instructor at both the Polytechnic and the Academy of

26 Ugo Ojetti, notably, was a critic of Rationalist architecture who had raised analogous points of opposition to Art Nouveau. See Richard Etlin, Modernism in Italian Architecture 1890-1940 (Cambridge, Mass.: MIT Press, 1991).
Boito had advocated a connection between artist and engineer, and has been compared to the French architect Viollet-le-Duc.27

The differences of sensibility that distinguished the Novecento architects and Rationalists in Milan disagreed were mirrored in the varied architectural works from the turn of the century, in that city. Boito's Casa Verdi (1899), a rest home for musicians, is widely regarded as a high point in the definition of the "creative eclectic." Criteria of judgment for works of architecture in this style had included adherence to a "constructive principle," the exterior being an expression of the interior, the disposition of forms "with freedom and independence rather than literal exactness," the effective coordination and juxtaposition of the recalled forms, the relationship of the work to the materials and conditions of its age, and the simplicity and comprehensibility of the result. Its architects stressed not only the synthesis of disparate elements but also the "originality" of the work, which was supposed to stand as a thing in its own right, without reliance on quotation from any given style.28

Giovanni Muzio's "Ca'Brutta" (1923) with its unusually shallow relief pattern of abstracted arches, was a project that engaged the sensibilities instilled by Boito and his followers, and advanced them

27 See Ezio Bonfanti, Città museo ed architettura, 11.

by applying them to novel materials.²⁹ However, it was not the first significant work in Milan to employ concrete. The Palazzo Castiglioni (1901-1903), by Giuseppe Sommaruga—often invoked to illustrate the style known as "Liberty" which arrived in Milan at the turn of the century—had been built with a reinforced concrete frame using the Hennebique system.³⁰ [fig. 1.1] Sommaruga invested considerable attention in the Liberty-style surface cladding and stone sculptural decorations, which included heavy decoration at the top and on the right end; in the rusticated rough-hewn cladding at the base in the manner of rustication; and in the animation of the base by oversized round windows with iron grilles. However, the frame was hidden.

Around the same time, the Contratti Store (1903), by Luigi Broggi, was a notable early example of an exposed structural system; its iron members were incorporated into the design.[fig. 1.2] Broggi contrived to expose the structure of the building, without compromising the overall effect, by tapering and doubling up the vertical supports, exposing them only in the center while the lateral supports were covered by masonry cladding. More delicate grilles and lettering continued the horizontal lines in the façade without adding weight to it—an effect heightened by the curved metal lintels. The

²⁹ The source of the creative eclectic, according to Meeks, lay in the "confidence" of late-nineteenth century architects that allowed them to go beyond their academic training. He describes "a mental climate of mounting self-confidence with the realization that the rules of academies were not final, that the conception of ideal beauty was not fixed forever, that archaeological exactitude had nothing to do with architecture, that artistic freedom was a reality." Meeks, "Creative Eclecticism," 17.

sculptural decorations are relatively inconspicuous. The modernistic tone of the building is also signaled by the visible incorporation of electric lights and double glazing into the front façade. By virtue of these details, the Contratti store appears, in retrospect, as a step along the path toward the "honest" exposure of contemporary means and building systems that preoccupied the Rationalists. It would be cited as an early antecedent by the Rationalist architect Piero Bottoni in his 1954 guide to "modern buildings in Milan."\(^{31}\)

In summary, the more or less explicit use of materials was a variable that distinguished two major tendencies in modern architecture in Milan, even before 1930. Although there were noted collaborations between the Novecento and Rationalist architects in Milan—including Triennale exhibitions and symbolic building projects of the Regime—a tension between these movements or stylistic tendencies persisted, and mainly followed the generational line between faculty and students at the Milan Polytechnic. Prominent Novecento architects, including Giovanni Muzio and Piero Portaluppi, were professors at the Polytechnic.\(^{32}\) They had been younger faculty alongside older professors, such as Gaetano Moretti, who was associated with the Floreale and Liberty styles of the late nineteenth and early twentieth century; and they would retain their positions


\(^{32}\) Portaluppi is often associated with Novecento, but Lucy Maulsby has observed his ambivalence toward that label, in her portrait of Portaluppi. See Maulsby, "Politics and Persuasion: The Architectural and Urban Transformation of Milan Under Fascism, 1922-1943."
through the 1950s.\textsuperscript{33} Much to the chagrin of younger architects, the Rationalist aesthetic was not a subject of instruction in the Polytechnic during this time, although it was tolerated in student work.\textsuperscript{34} Revision of the curriculum would be delayed until the 1960s, when this generation professors had retired.\textsuperscript{35}

The rise to power of Mussolini's regime galvanized the problem of a national style. The regime would reorganize the discipline of architecture in the interest of a systematic approach to this problem. A first step in this direction was the imposition of the Gentile Laws in 1923, as part of a broad program of reform directed by the minister of education, Giovanni Gentile. In architecture, the curriculum of the Regia Facoltà di Architettura in Rome was adapted and installed at new architecture schools at Venice, Naples, and Florence, as well as Turin and Milan, where Polytechnic Universities already existed. A requirement for admission to these schools was attendance of the

\textsuperscript{33} Meeks argues, in "The Real Liberty of Italy: The Stile Floreale," that the two movements were closely related.

\textsuperscript{34} Hence Giuseppe Pagano's comment on the young architect as an "autodidact," in his article on the Littorial prize [see below].

"liceo classico," the high school with the broadest, most rigorous humanities curriculum at the secondary school level.36

When Marco Zanuso matriculated at the Milan Polytechnic in 1934, the school was in its second year under the national curriculum; new architecture students became part of the highly structured professional system that had been erected in the early 1930s.37 The architectural syndicate, which oversaw the registration of architects, had been put in place in 1930 as part of a strict corporate structure for the assignment of public commissions by the Regime. The syndicate head, architect Alberto Calza Bini, sat on a board with the heads of other syndicates for the fine arts, literature, film, and other branches of culture. The tasks of the syndicate included the conduction of competitions at the national, regional, and local scale, and the awarding of architecture projects a process that the Regime approached strategically. Between the requirement of good standing in the Fascist Party as a precondition for commissions, and the sparse private-sector clientele in the autarchic economy of fascism, an

36 This stipulation pointedly excluded most women (who usually attended the liceo femminile), from attending architecture school and becoming architects. However, some licei classici, such as the Liceo Parini in Milan, admitted women. Catharine Rossi pinpoints the year 1928 as the first in which the graduating class of the Milan Polytechnic included women (she names two, Elvira Luisa Morassi and Carla Maria Bassi). But she observes that women were generally discouraged from pursuing education in any skilled trade, in Mussolini’s Italy, and only a small number of women completed degrees in architecture before 1960. Catharine Rossi, “Furniture, Feminism, and the Feminine: Women Designers in Post-War Italy, 1945 to 1970.” Journal of Design History 22:3 (2009): 243-255.

37 The new architecture curriculum was established in Venice in 1926; at Turin, Naples, and Florence in 1930; and at Milan in 1933. Paolo Nicoloso, Gli architetti di Mussolini (Milano: Fra Angeli, 1999), 12-20.
architect was compelled into obedience to the Regime. Whoever did not abide by their rules would not be put in the register and could not be considered for commissions.  

Historians have suggested that the competition was an effective counterpart to the cultural rhetoric of the Regime. It sustained the impression of openness to new ideas which Mussolini valued. But while the regime ostensibly invited visionary proposals, it could decline to respond to them at its discretion. In this way, the system served as an instrument of subtle control by the highest officials of the Regime, through the syndicate head and cultural ministers.

The Regime not only reorganized the discipline of architecture into a system; it also brought its own values to the problem through

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38 Paolo Nicoloso, Gli architetti di Mussolini (Milano: Fra Angeli, 1999), 18-20. Cultural and literary historian Ruth Ben-Ghiat observes analogous concentrations of prerogative in each of the syndicates of the national confederation, and notes their persistence even beyond the era of fascism: "Influencing job offers, juries, and examining commissions, they shaped power and patronage networks based on party membership, habituating generations of intellectuals to practices and attitudes that would characterize the Italian cultural world long after the fall of the regime." Ruth Ben-Ghiat, Fascist Modernities (Berkeley, Los Angeles: University of California Press, 2001), 22.

39 Ben-Ghiat argues that the cultural condition of fascism was a product of an unstable collection of forces, and explains that Mussolini's efforts to change internal culture were motivated in part by his efforts to maintain positive perceptions of Italy, overseas; "the desire to expand Italian influence abroad also shaped the evolution of cultural policy and cultural production under Mussolini." Ben-Ghiat, Fascist Modernities, 11.

40 Giorgio Ciucci observes that the subordination of the syndicate to the regime made it possible for fascist authorities to scrutinize, and reject, the plans of architects in various cities, according to their judgment. Giorgio Ciucci, Gli architetti e il fascismo (Torino: Einaudi, 1989). He emphasizes that "the significance was not in the break from what had gone on before, but the fact that competitions now happened in large numbers and all over the country, allowing the [regime's] architects to elaborate the possibility of participation and affirmation, thus of 'homogenization' around a few 'national' themes" (130).
the projects it gave to architects. These included monumental works with imperialist overtones, such as the completion of the Stazione Centrale in Milan. Other projects it commissioned were for emblematic buildings to showcase its feats of modernization: new cities, such as Latina and Sabaudia (1932 and 1934, respectively); exhibitions, including a major exhibition about the Fascist political agenda itself (1928); railway stations, such as the new station at Florence and the new University at Rome, both controversial projects 1933-1934.\textsuperscript{41} The projects for the institutional buildings belonging to the Regime had specific iconography, involving decorations and plan. I will argue below that the way of formulating the architectural project that placed a strong emphasis on the development of buildings into architectural symbols associated with a specific cultural message, was in part a product of the development of architecture and under pressure of the ambitious dictatorship.

Another area of influence on Zanuso and other young architects was the overlap of architecture and art culture. Paradoxically, Rationalism was the style of prominent exhibitions on the chosen themes of the state, and in certain major building projects; and at the same time, it was excluded from the Milan Polytechnic as a subject of instruction. It was practiced mainly in the studios and informal locations in Milan, in close contact with the artistic avant-garde. The debate over Rationalism, and the discussion of European examples such as the work of Walter Gropius and Le Corbusier, took place in the

\textsuperscript{41} Giorgio Ciucci, \textit{Gli architetti e il fascismo}, 130-136.
studios, bookstores, cafés, and galleries where architects met informally.

Architects casually crossed paths with artists as they followed their respective paths from school to gallery, exhibition, or studio in Milan, forming alliances. Zanuso would give the impression that these peregrinations were important in his memoir, where he describes receiving part of his education in the architecture studios, bookstores, galleries, cafés and trattorias of the city.⁴² Such

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⁴² Marco Zanuso, Memoir speech for "La Resistenza una Cultura che diventa azione; architettura arte letteratura cinema," a conference held at Istituto Universitario di Bergamo March 29-31, 1985, 1-8. [FMZ MZ COR 004] Marco Zanuso Archive, Archivio del Moderno, Mendrisio. Zanuso describes "[S]culptural exercises from Wildt, drawing in the manner of Tomaso Buzzi, the however-old Moretti who illustrated the details in stone and Italian marble of Palazzo del Senato in Montevideo; and many extemporaneous sketches with Mancini in the early years, Portaluppi later"(1). Mentioning Gropius, Aalto, and Madame De Mandrot (a Swiss designer and philanthropist, supporter of C.I.A.M.), Zanuso described learning about modern architecture among Milanese Rationalists and through contemporary journals. "Outside of the school the BBPR studio in its early years, all in white; Lingeri in corso Vittorio Emmanuele; Pagani at the Bastioni di Porta Vigentina and Terragni at Como; the Domus of Ponti and Casabella of Pagano. . . ." Ibid. N.b.: in the early years of their practice, the BBPR wore white laboratory jackets while at work in their studio. (See also: Silvana Milesi, "Biografia." In Marco Zanuso Architetto, edited by Manolo di Giorgi (Milan: Skira, 1999), 319.
informal instruction and discussion were the nearest approximation of an education in modern architecture, in 1930s Milan.\textsuperscript{43}

The Bar Craja and Galleria Milione were also important meeting places for artists, collectors, and various patrons of the arts.\textsuperscript{44} In this milieu, the study of Rationalist architecture was carried out in an atmosphere of exchange between architecture and other arts, and was particularly affiliated with "astrattismo" ("abstractism") in art. Zanuso's early entanglement with both architects and artists is illustrated by an incident described in his memoir: a trip to Rome at night to protest against conservative attacks on Rationalist

\textsuperscript{43} Ezio Bonfanti observes, in his monograph on the firm BBPR, that the architects' only official cultural organization during the 1930s was the Fascist architecture system itself; "The official school, and the official organs of teaching and organization of the profession, would absorb all the formative tasks and could recurrently exercise a decisive role in any issue." Bonfanti, \textit{Città museo ed architettura}, 7. By contrast, in Germany, Switzerland, or Austria, there was a "Werkbund"; in England, by 1915, there was the Design and Industries Association. Prior to Fascism, such organizations had existed in Italy as well—for instance, the "Associazione artistica fra Cultori di Architettura" (founded in 1907) persisted under fascism but had previously been more influential, taking part in the formation of the first architecture school in Italy, the Regia Facoltà di Architettura in Rome (circa 1919). Massimiliano Savora cites the same group in connection with the initial ideas competition for the Milan arengario (in 1927). "Sagrato del Duomo; Milano, piazza Duomo, 1926-1929." In Piero Portaluppi \textit{linea errante nell'architettura del Novecento}, edited by Luca Molinari (Milan: Skira, 2003), 134-135. The Società Umanitaria, at Monza, had played a role in establishing the Triennale exhibition program (in 1923). Anty Pansera, \textit{Storia e cronaca della Triennale} (Milan: Longanesi, 1978).

\textsuperscript{44} The Bar Craja, designed by Luciano Baldessari with Figini and Pollini; and the Galleria del Milione, a gallery and bookstore designed by Pietro Lingeri (both in 1930), were key meeting spots in Milan. Ezio Bonfanti observes that architects, including the BBPR, would locate themselves near these locales. Bonfanti and Porta, \textit{Città, museo ed architettura}. 
architecture and abstract art. (For more on Zanuso's relationship with artists, see Chapter 2.)

Student Projects: Symbolic Buildings for Fascism

The project for the *Sacrario dei Caduti* (1938), in which Zanuso took part in a team of students, was the design of a sacred chamber in a complex of buildings that made up the headquarters of the Fascist party in Milan. The *Sacrario* was one of a collection of architectural elements distributed among the typical buildings used by the Regime to house its offices and to host the programs of activity through which the public was directed and consensus maintained in each Italian city. These included the *casa del Fascio*, *dopolavoro*, and *balilla*—the seat of party offices, the center for socializing after work, and the site

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45 Zanuso mentions Giuseppe Terragni, (the gallerist) Franco Ciliberti, and (the painter) Osvaldo Licini. "[O]ne left together on the night train in 3rd class for Rome with Terragni, Lucini, Radice, Ciliberti to protest at the Adriano theater with Marinetti against Ojetti and Interlenghi who in the official press of the Popolo d'Italia, Il Secolo, accused rationalist architecture of internationalism." Zanuso, "La Resistenza," 1. This activity most likely took place during or after Zanuso's stage in Terragni's office at Como, an event not mentioned in the memoir but cited by François Burkhardt in *Marco Zanuso Design* (Milan: Federico Motta, 1994). Other accounts of 1930s Milan confirm this impression of a milieu of close association between architects and writers, artists, philosophers, and others. See for example Giulia Veronesi, *Difficoltà politiche dell'architettura in Italia 1920-1940* (Milano: Libreria Editrice Politecnica Tamburini, 1953), or Carlo Belli, *Il volto del secolo* (Bergamo: Pierluigi Lubrina Editore, 1988).
of children's athletic programs, respectively. As the largest and most ceremonial of these, the casa del fascio normally housed party offices, fascist women's groups, and rooms for screening films and newsreels. In addition, it normally had iconographic elements that were sometimes separate buildings and sometimes attached to a single main building, including a tower called the "torre littorali" and an "arengario," a platform or balcony that was understood to stand in for the presence of Mussolini.

In the beginning, the Fascist Regime appropriated existing buildings for use as iconic buildings. By the early 1930s, it had become a theme for new construction; between 1929 and 1933, in a period of particular sympathy within the administration, several examples were designed and built by architects. In Milan, the Palazzo Besana in which the casa del fascio was initially housed, was no longer adequate by the mid 1930s. Piero Portaluppi presented a new

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46 Paolo Portoghesi, "Un capolavoro di architettura sullo sfondo di una ricerca tipologica," in L'Architettura delle Case del Fascio, edited by Paolo Portoghesi, Flavio Mangione, and Andrea Soffitta (Florence: Alinea Editrice, 2006), 23-52. Portoghesi explains that these buildings originated after the Fascists, who had dispersed the social institutions established by workers' movements around the 1922 March on Rome, sought to "refill the void" with "analogous buildings that could work to secure public consensus" (my paraphrase of the Italian).(25-6) The first type that the Fascists established was the "dopolavoro," site of organized activities after the work day, administered by a nationwide program; the first of these was built in 1923, shortly after the March on Rome; the second was an analogous program for the "Balilla."(26) On the Dopolavoro, see Victoria de Grazia, Culture of Consent: Mass Organization of Leisure in Fascist Italy (Cambridge, England; New York: Cambridge University Press, 1981).

47 Ibid., 47. The torre littorali symbolized the medieval Italian tower (more on this symbolism below).

48 Ibid., 27.
proposal for Milan. His project, known as the "Seat of the Federation of Milanese Fascists," would include a casa del fascio and other buildings, occupying a large block in the city, including a cross-street and courtyard. The ground-breaking took place in fall 1936.49

The Sacrario dei Caduti (1938) ("crypt of the fallen," also sometimes called the sacrario dei martiri, the "crypt of the martyrs") was a memorial to fallen Italian soldiers of World War I and fallen militants of fascism, incorporated into this complex. As a standard symbolic component among the administrative and ceremonial buildings of fascism, it was designated or constructed in every major town. Portaluppi's "Seat of the Fascist Federation" complex, comprised of a new casa del fascio and other symbolic offices, included a sacrario for Milan.

Portaluppi, who had been teaching at the Polytechnic since 1915, created a competition for his students to design this part of the complex. Marco Zanuso participated as part of the team that won, which also included Gianni Albricci, Mario Tevarotto, Luigi Mattioni,

Gianluigi Reggio, and Mario Salvadé.\textsuperscript{50} The project included a bas-relief sculpture on the ceiling, by Lucio Fontana, the Italian-Argentine artist who was a mainstay of the Milan avant-garde and a frequent collaborator with Milanese architects both during the 1930s and after the Second World War.\textsuperscript{51}

The Seat of the Federation of Milanese Fascists took up a city block.[fig 1.3] The Sacrario was set in a side of the building with an entrance directly from the street. Two details in particular gave the impression of a niche in the building continuous with the street, rather than a room inside the building: the interior walls were clad in the same stone as the building exterior; and the doors to the space were glass, and set in a glass wall, so as not to disturb the impression that the sacrario was an impression into the building from the outside, rather than a conventional room.[fig. 1.4]

\textsuperscript{50} Paolo Nicoloso, "Il contesto sociale, politico e universitario di Portaluppi." In Piero Portaluppi linea errante nell'architettura del Novecento, edited by Luca Molinari (Milan: Skira, 2003), 240-249. Portaluppi's demurral is observed by Nicoloso who, in a commentary on Portaluppi and fascism, explains that Portaluppi had volunteered his design of the fascist headquarters, and pursued it through bureaucracy to get it built, but declined to design the sacrario, which Nicoloso calls the most symbolic in the "fascist liturgy" ("più simbolico della liturgia fascista"), alluding to fascism's quasi-religious iconography. Nicoloso cites Portaluppi's memoir, written as a part of "purification" process after the war, on this topic. He suggests that Portaluppi and other older architects believed that Zanuso and his peers were products of fascist society in a special sense, having grown up from childhood within its institutions.(248)

\textsuperscript{51} Cecilia De Carli, "Fontana e gli architetti: un inedito" Arte Cristiana 77 (Mar-Apr 1989): 157-162. In conversations cited by De Carli, Zanuso recalled Fontana's enthusiasm, and their group experiments with models at the Fiera Campionaria fairgrounds studying the figure in flight. Fontana, a prolific exhibitor among Milan artists, was born in Argentina to Italian parents in 1899. His training as a sculptor included studies with Adolfo Wildt at the Accademia di Brera in Milan, in 1928. His collaborations with architects during the 1930s included installations at the Triennale exhibitions in 1933 (V) and 1936 (VI).
The central path through the antechamber of the Sacrario was paved in grey cut gneiss, just above street level, flanked by a row of white stone tablets. Toward the back of the space, a black slab of stone, with the word "presente" ("present") repeated three times, punched out along its lower edge, hovering overhead while at the back of the space a symbolic gravestone was placed, lighted by a votive lamp that also served to illuminate the repeated word. [fig. 1.5] The floor of the antechamber was a platform of lightweight construction over a basement. To either side, a row of white slabs emerged through a gap that ran along the wall on either side, so that their top portion was in the street level space. The tablets were inscribed with the names of fallen soldiers.52

The use of stone as an abstract symbolic material in the Sacrario dei Caduti is reminiscent of the stylistic approach of the Novecento in architecture. The Novecento architects, to a greater extent than the Rationalists, sought an explicit connection to tradition through the quotation and revision of motifs of past styles. Their buildings, in some examples, evoked the theme of historical time and earned the label "metaphysical," and an association with "magical realism" in

Some Novecento projects were linked to a concept of "mediterraneità" ("mediterranean-ness") which harked back to a glorious shared past of Italy and ancient Greece. This could at times endear their proposals to conservative elements in the Regime. However, the Novecento architects, like the Rationalists, were also concerned with modernity and would sometimes embrace new materials. As I noted above, Muzio's Ca'Brutta (1923), the standard of modern architecture in Milan before Rationalism, was made of reinforced concrete. Piero Portaluppi, who gave the Sacrario dei Caduti project to his students, c. 1938, is often associated with the Novecento, but he was also identified with a highly individualistic style.

The line between these modes of Italian modern architecture is not easily drawn according to affiliation—the artist Mario Sironi, for example—\footnote{An element of "magical realism," which would linger in Italian architecture in the 1940s and for the rest of the century, aimed at the creation of myths that would have the appearance of eternal truths. A key figure in the Novecento was Massimo Bontempelli, an editor of Quadrante, one of the main journals of avant-garde architecture, founded in 1933. As Ruth Ben-Ghiat explains Bontempelli's concept, in her analysis of literature and other cultural forms under fascism, "Novecento" entailed "a collectivist and mythopoetic sensibility that would 'infuse daily things with a sense of mystery,' transforming local and quotidian realities and truths into universal ones. This 'magical realism,' as [Massimo] Bontempelli called it, placed writers in the role of bards of the fascist national community and invested them with the task of 'inventing myths and fables that then distance themselves from the writer to the point of losing all contact with his pen. In this way they become the common patrimony of men and almost things of nature.'" Ruth Ben-Ghiat, Fascist Modernities (Berkeley, Los Angeles: University of California Press, 2001), 28. See also the discussion of Bontempelli in the dissertation by David Rifkind on Quadrante; David Rifkind, "Quadrante and the Politicization of Architectural Discourse in Fascist Italy" (Doctoral dissertation, Columbia University, 2007).}

\footnote{See Richard Etlin, introduction to Modernism in Italian Architecture 1890-1940, xiii-xxiii.}

\footnote{Nicoloso, "Il contesto sociale, politico e universitario di Portaluppi," 248.}
example, collaborated with Giovanni Muzio, who was associated with the Novecento, as well as Giuseppe Terragni, who was a founder of Rationalism. However, points of fundamental difference between the two would entail distinct approaches to the typological development of buildings for the Regime as symbols of its agenda of the modernization of Italy. In debates that surrounded major competitions, such as the Florence Railway Station and University of Rome (in 1933-1934), these distinctions were flashpoints for debate, not only about the Regime's political intentions, and their proper expression, but also—reviving prior unresolved dissension among older architects—about the validity of different putative foundations for an Italian national architectural style.  

For the format of the Sacrario, with its row of tablets, figural sculptures, and reliquary, the students drew on previous examples, including another memorial chapel in Milan. Fontana's bas relief depicted a flying group of figures, arms outspread, carrying a dagger, a log, a garland, symbolic motifs, and was placed on the ceiling. This relief was illuminated by lights trained up against the white tablets from below.

The students' project included both functional and material symbolic aspects. The depth of the sanctuary revealed it to be a room

56 Giorgio Ciucci, Gli architetti di fascismo, 130-136.

on the interior, but the lining of the walls with the same stone as
the building exterior cast this sanctuary as a niche on the street. To
the extent that the gaps along the walls achieved an effect of a,
suspended floor plane, the white tablets would have served to
demarcate and dematerialize the perimeter of the Sacrario, to isolate
the path in the asymmetrical room in which it was set and at the same
time, to center the visitor and mask the asymmetry of the actual
space. [fig. 1.6] Similarly, the students made use of words
(“presente”), as well as the arrangement of stones—with their distinct
sizes, colors, and textures and the positioning of the visitor in the
space, to evoke an atmosphere of reverence. The difference between
Rationalist and Novecento architecture was often a matter of degree,
and in this project, Zanuso and his classmates employed aspects of
both to create a symbolic space of Italian modernity, and as a result,
they implicitly asserted that the two tendencies were both proper to
Italian modern architecture.

A review of Zanuso’s Sacrario dei Caduti in Casabella
Costruzioni, in 1941, is evidence that he and his classmates, like the
practicing architects in Milan, had been expected to produce a
building that would play an iconographic role with respect to the
symbolic buildings of the Regime, and had succeeded. The author
remarked that the students, called to execute “a work of pure

architecture," had met the "responsibility" entailed by the sacrario theme.  

Portaluppi, who is said to have assigned the project to his students on the hypothesis that, having grown up under fascism, they were more qualified than he was to design a memorial shrine in its spirit, would later point to his demurral of the design of this charged element in the Regime's iconographic scheme, as evidence of his own ambivalence toward the Regime. Irrespective of Portaluppi's attitude toward the Regime, he could plausibly have expected that Zanuso and his classmates, who were six years old when Mussolini marched on Rome in 1922, had been instructed in the narratives of the Regime's symbolic buildings.

Zanuso's proposal for the Milan arengario was a competition project in which he collaborated with a group of students, Giovanni Albricci, Augusto Magnaghi, Mario Terzaghi, and Pier Giulio Trolli, in 1936, most likely as an entry in the competition that was held in

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58 The passage in Italian, from the review of the project in Casabella Costruzioni: "... chiamati così a collaborare in un'opera di architettura pura ... risolvere un problema di alta funzionalità e di grande responsabilità." "Sacrario dei Caduti Fascisti nella Nuova Federazione di Milano," 44.

59 This interpretation is elaborated by Paolo Nicoloso in his essay on Portaluppi. He cites Portaluppi's account of the project in documents from the postwar "purification" proceedings. The design of this "most symbolic object in the fascist liturgy" was given to "a few young students at his school who belonged to a "natural" fascist generation (Nicoloso's expression is "generazione naturaliter"); apparently Portaluppi did not think himself the "right person" for the task. "La progettazione del sacrario della sede del fascio primogenito, l'oggetto più simbolico della liturgia fascista, non è affidata a Portaluppi. Viene demandata ad altri più 'degni,' ad alcuni giovani della sua scuola che appartengono a una generazione naturaliter fascista." Nicoloso, "Il contesto sociale, politico e universitario di Portaluppi," 244-246.
April of that year.\(^{60}\) Like the sacrario dei caduti, the arengario was an element in the iconographic architectural repertoire of Fascism. Unlike the sacrario, it was a free-standing building.

Ordinarily, an arengario was not a building; it was a platform or balcony that extended outward from a building, sometimes from the torre littoriale. However, an arengario had been proposed for the site adjacent to the Duomo in 1927, as part of the completion of the master plan for the Piazza, following an update of that plan by Portaluppi with Marco Semenza. The siting provided a way to represent the regime on the major square of the city, where official public ceremonies had traditionally taken place; and a space had been cleared along the Piazza's perimeter by the demolition of a wing of the Royal Palace. An initial competition for the building, held in 1934, had concluded without a winner.\(^{61}\)

The jury of a second competition, convened in April 1937, awarded the project to Portaluppi and his team, whose members were Enrico

\(^{60}\) "Un'idea per Piazza del Duomo a Milano" Il Vetro XVI (Jan-Feb 1937): 28-29.

Griffini, Giovanni Muzio, and Pier Giulio Magistretti. The Arengario by Portaluppi, Muzio, and Magistretti which was realized between 1938 and 1956 (interrupted by the war and completed under new political circumstances), bore a strong resemblance to the work of Muzio, with a rectangular volume and arched loggia resembling his previous projects for the University of Milan. The team's intervention consisted of two rectangular volumes with identical arched loggias, facing the Galleria Vittorio Emmanuele across the Piazza.[fig. 1.7] Mirror images of one another (as in the baroque Porta del Popolo at Rome), they framed a new street leading away from the Piazza.[fig. 1.8] According to the architects, the two formed a gateway from the old city to a future one. Both buildings had ceremonial rooms, including a gallery of statues and jewels and a gallery of iconography. In front of the arcades, on the ground floor, were statues of heroes from Milan's history. The arengario itself, which protruded from the second level of the building, was a truncated walkway supported by a sculptural column, on the corner closest to the Duomo, aligned to its balcony.

Zanuso and his classmates proposed a building envelope that enclosed the entire building, an assembly of masonry walls and rectangular volumes, in glass walls. The glass volume was placed on a low stone plinth. Its solid parts were the floor plate of the second floor, which included a balcony, and a masonry volume that contained an exterior stair that led to the balcony from the ground level. Solid

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interior walls of the building were set back from the building envelope, which was to support a roof whose shallowly curved shape, in drawings, suggests a truss structure. [fig. 1.9] Instead of an iconic balcony, the arengario was a pedestal positioned on the corner closest to the Duomo. The masonry pedestal, with a platform and parapet, was connected to the second level by a walkway and a short flight of steps.  

The choice of glass walls for the building, whose interior program consisted primarily of meeting spaces for occasional use, was one of several gestures through which the students addressed the contextual problem of placing a new building on Milan's central Piazza, whose tone of decorum was set by the cathedral and adjacent historic buildings. They aligned the building's floors to the floors of adjacent buildings; and they connected it to the old Royal Palace by a walkway, through an extension consisting of a blank stone-faced wall, set at an angle to the Palace itself and providing a backdrop. The use of glass for the building envelope meant that for people in the Piazza, views of the Duomo and surrounding buildings would be minimally obstructed.

At the same time, the use of glass was both a symbolic figure of transparency and its literal mechanism. From inside the Arengario, fascist officials would have enjoyed views of the Piazza Duomo during

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64 "Un'idea per Piazza del Duomo a Milano" Il Vetro XVI (Jan-Feb 1937): 28-29.
meetings. But while the drawings show that interior walls would have
screened officials from view from nearby, the overall impression is of
their exposure. The officials would have conducted their meetings in a
vitrine on the corner of Milan's most prominent square.

In this regard, Zanuso and his classmates' design for the Milan
Arengario was tinged with irony. By proposing a glass cube, they gave
a distinctly modernistic tone to this building, which was a symbolic
extension of Mussolini's microphone. They specified double glazing and
air conditioning to meet thermal requirements, which would have
showcased a level of technical development in Italy that made a glass
building achievable. But by proposing a glass meeting place, they
announced a comparable political modernity. Mussolini's government had
represented itself to its youth as reasonable, rational, and
transparent. The students' Arengario was a symbol that conveyed the
high expectations that the Regime itself had instilled in its young
intellectuals, and at the same time, perhaps unconsciously,
foreshadowed their collapse.

The use of glass and a metal frame in the building envelope of
the Arengario identifies this project with the Rationalist stylistic
ethos, in which the properties of a material and the manner of its use
were part of the rationale for the architectonic form and details. For

65 This is pointed out in "Un'idea per Piazza del Duomo a Milano":
"Given that all the authorities must meet on demonstration days, if there
were windows, only a few could face the windows, whereas this way, the
complete vision of the Piazza Duomo is given to all the authorities in the
room." Il Vetro XVI (Jan-Feb 1937): 28. ("[D]ovendo raccogliere nei giorni di
manifestazioni tutte le autorità, se vi fossero delle finestre, soltanto
pochi potrebbero affacciarsi alla finestre, mentre così a tutte le autorità
riunite nel salone, è possibile la visione completa della piazza del Duomo.")
example, a noted point in the controversy over the University of Rome buildings, in 1932-1933, was the use of the square-section pilaster, as opposed to a column, on the argument that the former was entailed by the material of reinforced concrete, in contrast to the stone or brick in classical models. This manner of decision-making, evident in the finished building, was put forth as a symbol of fascist modernity, using the implications of new materials for architectural form to emphasize the radical forward-looking cultural thrust that was implied by Mussolini's strongest claims of modernization. In addition, the Rationalists self-consciously aligned their architecture with the architecture of modernism elsewhere in Europe, while maintaining the intention to recall the strongest aspect of the classical tradition.

All of these intentions were invoked in the discussion of a project for a Torre littoriale and Arengario on the same site, published in *Casabella* in 1935, which appears to have been an inspiration to the students. That proposal, the work of Ignazio Gardella, included a plinth a few steps above the Piazza, and at a corner of the plinth, a pedestal for the arengario. Behind the pedestal, was a nine-story tower with a masonry core enclosed in a reinforced concrete grid structure.[fig. 1.10] At the center of each floor was a staircase, the floor area at the perimeter serving as a landing. The author acknowledged that certain observers would regard the project as un-Italian, but he countered that, in fact, it could be compared to "architecture of our own best traditions: certain bell-

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towers of Roman Lombardy, of powerful quadrangular structure, or the Giottesque bell-tower itself, in which the rhythm of the horizontals and the willful sculptural division are continually counterposed . . . ." He added that the intention is for this project "to recall many illustrious examples and above all the frankness and elementarity of the entire spatial invention," but that at the same time, "the feeling of the form or the very essence of language is here completely changed."67

The project by Zanuso and his classmates resembled Gardella's scheme in plan: it reprised the configuration of the enclosing frame around the central core, and the use of a pedestal for the arengario balcony. But instead of a tower, the students proposed a two-story structure. In their attention to the relationship between the program of the space and its structure, the students used an essentially Rationalist rhetoric, evoking the concept of political transparency by enclosing the walls in glass. Their proposal of a thin metal structure was evidently a nod to the glass curtain walls of Walter Gropius's factories, Bauhaus buildings, and other influential European examples that had inspired the earliest Rationalists. The students' wrote in

67 Gian Alberto Dell'Acqua, "Una Torre" Casabella 90 (1935): 28. ("È forse più interessante riferirci per pura comodità di orientamento—sia detto per evitare qualche troppo scandalizzata protesta—ad architettura della migliore tradizione nostrana: certe torri campanarie del romanico lombardo, dalla poderosa struttura quadrangolare o lo stesso campanile giottesco, in cui il ritmo delle orizzontali e la volontà di quadratura plastica si contrappongono continuamente . . . alla linee filante all'insù degli spigoli. Si intende che quello che nel nostro progetto ci richiama alla mente tanto illustri esempi è soltanto la schiettezza ed elementarità dell'intera invenzione spaziale; che, per il resto, il senso della forma ossia l'essenza stessa del linguaggio architettonico è qui completamente mutato.")
their statement that they used glass "... [B]ecause it isn't possible for an architect of our time to complete a work, however decent, hiding the typical elements that recur in every project: open courtyard, conditioned air, glass partition walls." 68

The gesture of transparency in the project may have been an attempt to achieve an effect analogous to Giuseppe Terragni's Casa del Fascio at Como (1932-1936), which was newly completed around the time of Zanuso's design. Terragni, as a founding member of the Gruppo 7, is perhaps the most revered figure in Italian Rationalism. 69 This band of seven architects, students in their last year at the Milan Polytechnic (except Rava, who had graduated and was an instructor), had named and initiated the movement with the Rationalist Manifesto, four articles

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68 "Un'idea per Piazza del Duomo a Milano," 28. ("... [P]erché non è possibile per un architetto dei nostri giorni compiere un'opera, anche appena decente, trascurando gli elementi tipici che debbono essere la base di ogni progetto: cortile aperto, aria condizionata, pareti di vetro.")

69 The other members of the group were Ubaldo Castagnoli, Sebastiano Larco, Guido Frette, Gino Pollini, Luigi Figini, Giuseppe Terragni, and Carlo Enrico Rava. The historian Dennis Doordan maintains that, "Based upon the available evidence, Terragni, Rava, Figini, and Pollini appear to have constituted the vital core of the group." Dennis Doordan, Building Modern Italy: Italian Architecture 1914-1936 (New York: Princeton Architectural Press, 1988), 45. See also: Ellen Shapiro, "Il Gruppo 7," Oppositions 6 (1976): 85-88.
that appeared in the journal *Rassegna Italiana*, in 1926-1927. An embrace of the European modern architectural style was a basic claim in their first manifesto essay, "Architettura" (1926). Rationalist architecture was meant to be based on research into standardized building types for the updated institutions of a society undergoing a broader modernization. Elements of the new style were to be identified "by selection," according to the perfection of a few fundamental types. These types would be used for recurring programs—docks, silos, workshops, and other industrial building types—all over the world. The manifesto also prescribed a strict adherence to logic, characterized by reasoned decisions and by the "perfect"

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70 "Architettura" (Rassegna Italiana 18, December 1926); "Architettura (II): Gli Stranieri" (Rassegna Italiana, February 1927); "Architettura (III). Impreparazione—incomprensione—pregiudizi" (Rassegna Italiana, March 1927); and "Architettura (IV). Una Nuova epoca arcaica" (Rassegna Italiana, May 1927). In his history of modern architecture in Italy, Terry Kirk characterizes the Gruppo 7 manifesto as a response to an article on the Paris Exhibition of 1925, written in the tone of forecasting, by Roberto Papini. He cites "Le arti a Parigi nel 1925, primo l'architettura"; "Secondo gli interni e i mobili" in *Architettura e arti decorative*. Kirk characterizes this journal, which was edited by Marcello Piacentini, as the official magazine of the fascist architecture syndicate. Terry Kirk, *The Architecture of Modern Italy vol. 2 Visions of Utopia 1900-Present* (New York: Princeton Architectural Press, 2005).


72 A key point of reference in the Gruppo 7 manifesto, a series of articles published in 1926-1927, is the book *Internationale Architektur* (1927), by Walter Gropius. The "new spirit" is cited in the apparent convergence of practices, from manufacture to architecture and art; the architects read the results in examples from Gropius's survey. Other claims in "Architettura" were more specifically directed at the Italian situation, including a survey of international architecture (February, 1927); a discussion of obstacles to progress in Italy (March, 1927); and a review of manifestations of the "new spirit" in various contemporary art forms (May 1927), including an admonition to architects to renounce the old notion of the artist as a selfish, creative individual.
correspondence of the building structure to the task it would carry out. All of this was contrasted to the habit, tradition, and sentimentality of historicist architecture of the nineteenth century, which intervening movements had too weakly opposed, according to the Gruppo 7.

An intricate building designed through operations on a grid, it was situated on a square near the Como cathedral.\(^{73}\)\{fig. 1.11\} The Casa del Fascio by Terragni was the first of its type to be designed by an architect of the highest qualifications, and it is unusual in its formal self-consistency as a unit and its lack of the conventional iconography of the casa del fascio type.\(^{74}\) The building was so firmly resolved as a singular self-consistent object that the addition of an arengario and tower posed a problem.\(^{75}\)

The metaphorical "transparency" of Terragni's Casa del Fascio has been cast as an attempt to figure the "Mussolinian metaphor of the party as a 'glass house' in which nothing is hidden and no one can

\(^{73}\) See Peter Eisenman, Giuseppe Terragni: Transformations, Decompositions, Critiques (New York: Monacelli Press, 2003), and Daniel Libeskind, Terragni Atlas: Built Architectures (Milan: Skira, 2004), for analyses of the design process and derivation of the form. Terragni designed a second Casa del Fascio at Lissone (1937-1939); except as noted, the Terragni "casa del fascio" referred to here will mean the one at Como.

\(^{74}\) The quoted expression is Portoghesi's. "Un capolavoro di architettura sullo sfondo di una ricerca tipologica," 27.

\(^{75}\) Ibid, 47. The symbolic role of these elements was at one point addressed through the proposal of images for the panel on the right of the front façade, suggested by the artist and designer Marcello Nizzoli to be "inscribed photomechanically" on the stone. A second proposal was for a platform, separated from the building, with an equestrian statue on top. Neither was realized.
isolate himself in his own privacy."76 After the building was in use, Terragni himself was disappointed to discover that a fascist official at Como, whose office was in the Casa del Fascio, hung curtains in his window to conceal his presence or absence.77

Terragni and the other founding members of the Gruppo 7, had written of belonging to a "privileged" generation. They had argued that their position in time gave them a view of historical change, while their youth gave them capacity to confront dramatic new possibilities without the burden of nostalgia. "This is their strength, our strength," they wrote in their manifesto, referring to themselves and other young architects as distinct from their elders.78

76 Portoghesi, "Un capolavoro di architettura sullo sfondo di una ricerca tipologica." Portoghesi refers to the "metafora mussoliniana del partito come 'casa di vetro' in cui nulla si nasconde e nessuno può isolarsi nella propria privatezza." ["Un capolavoro di architettura sullo sfondo di una ricerca tipologica," 31.] The openings, Portoghesi explains in a second passage, "become the focus of an effort to give the building a transparency that has to do with the use of glass and mysteriously permeates even the closed walls. In this way the Mussolinian idea of the house of fascism, as a 'glass house where all can look' finds a first metaphorical expression, even if in this sense, of the correspondence between the transparency of the building and the comportment of its guests." Ibid., 46. ("Le forature divenono così il punto di forza per dare all'edificio una trasparenza che va al di là dell'uso del vetro e permea misteriosamente anche le pareti chiuse. Così l'idea mussoliniana della casa del fascismo, come 'casa di vetro dove tutti possono guardare' trova una prima espressione metaforica, anche se in questo senso, della corrispondenza tra la trasparenza dell'edificio e il comportamento dei suoi ospiti.")

77 Ibid. 45-46.

78 The Gruppo 7: "It remains for Italy to give the new spirit the maximum development and take it to its extreme consequences, so that it dictates a style to other nations, as in the grand periods of the past. Nevertheless, there is in Italy a desire to not recognize this new spirit, at least for the time being." ("Sta all'Italia di dare allo spirito nuovo il massimo sviluppo di portarlo alle sue conseguenze estreme, fino a dettare alle altre nazione uno stile, come nei grandi periodi del passato. Tuttavia, ci si ostina particolarmente in Italia, a non voler riconoscere questo spirito nuovo, almeno per ora.") Castagnoli, Figini, Frette, Larco, Pollini, Rava, and Terragni, "Architettura," 100.
But historians have suggested that the "privileged" generation was a disappointed one, by the late 1930s, once Mussolini's initial radicalism was evidently tempered by the necessities of maintaining his power. This would lead to a turn away from fascism by many architects who had supported it, reflecting the indignation of a generation, sometimes called the generation "naturaliter" of fascism, that was destined to become "'a generation betrayed by its fathers.'"79

Marco Zanuso was more than ten years younger than Terragni, who had been an original member of the Gruppo 7. He graduated from the Polytechnic in 1939, just when Italy joined World War II.80 However, Zanuso, like Terragni and other prominent young architects affiliated with Rationalism, had set out to start his career as a young architect influenced by modern architecture, along the path laid out for

79 These phrases are those used by the Gruppo 7 (in "Architettura"); and by Eugenio Montale (from Auto da fé (Milan: Il Saggiatore, 1966), 45.) and Guglielmo Peirce, from an essay in Il Saggiatore, a magazine of commentary published during the early 1930s (Both cited in Ezio Bonfanti, Città museo ed architettura, 1.) Ruth Ben-Ghiat identifies this generation as those who were born between 1905 and 1915. She argues that Italian intellectuals who had been too young to go to war in 1914 were less responsive than their elders to the pageantry, and the military operations, that Mussolini favored. She adds, "[D]uring World War II, though, the regime lost the support of many young intellectuals, including those of a newer generation—born around 1920—who had come of age entirely under the regime. . . . Whatever their provenance and formation, in the final war-torn years of the dictatorship young intellectuals began to utilize their positions within fascist cultural institutions to advance models of national culture divorced from Mussolini's state. In the end, the military enterprises that were central to official schemes of national reclamation turned many in their twenties and thirties against the fascist regime." Fascist Modernities, 13-14.

80 By contrast, Terragni and the members of Gruppo 7 enjoyed a longer period of activity under fascism, having graduated from the Polytechnic in 1926-7. The members of BBPR (Ernesto Nathan Rogers, Enrico Peressutti, Ludovico Barbiano di Belgiojoso, and Gianluigi Banfi) graduated in 1932.
architects by the Fascist system. The appropriation of the "glass box" as an architectural form affirmed a range of Rationalist ideals, not only the expectations of the Gruppo 7 architects and their followers for the Regime, but also the cosmopolitan outlook of the influential critics and writers, such as Giuseppe Pagano and Eduardo Persico who, in their own work as editors of Casabella, had encouraged the interpretation of proposals in international modern architecture for a modern architecture in Italy.

A third project by Zanuso as a student, the Albergo Rifiugio (1938), designed with Giovanni Albricci, was the winning entry in the "Littorial Prize" of 1938. Awarded by a nationwide competition, the Littorial Prize was an architecture student's most prestigious award, the bottom rung of the ladder, so to speak, of the fascist architecture system. The program was for a ski lodge. The Albergo Rifiugio was a mundane dormitory for youth in the mountains, in contrast to urban iconographic projects such as the the Sacrario dei Caduti and Arengario; but this work, like the others, was seen by the architects and their audience as an exercise in the use of architecture to announce and reinforce collective values. The commentary of Giuseppe Pagano, whose review of the competition results was published in Casabella, in the same year, indicates that for this project, the goal was on a spirited architecture that was also

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81 The Littorial prize was apparently an example of "encouragement prize," a small award meant to acknowledge young talent and reinforce loyalty to the Regime. Ben-Ghiat observes that a notable winner in literature was a youthful Elio Vittorini, later a Communist writer and editor in Milan. Ben-Ghiat, Fascist Modernities, 25.
characterized by "modesty," to wit, "that prideful modesty that is indispensable in Italian civil architecture."  

Zanuso and Albricci's design included spaces for leisure and contemplation, including a reading room on a ground floor adjacent to the kitchen, dining room, and depository for skis, and a canteen area. The overall design was derived from the relationships between these. The canteen was positioned on a half-level in such a way that both the hallway to the bedrooms above, and the more formal dining room below, would be visible from a seat at one of the tables, each a half-flight of steps away.[fig. 1.12] This was part of a split-level scheme in the section, such that the floors are joined in an almost continuous flow of space. A spiral staircase connecting all floors, and a break between the two roof planes, accentuate this configuration.  

Pagano, in his comments, describes the littorial prize as a window into the minds of architecture students responding to their training. A key theme in his remarks is his recognition of the students' sense of artistic taste as well as structural sensibility. Zanuso and Albricci showed "the best qualities of the constructor and

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82 Giuseppe Pagano, "I littorali dell'architettura" Casabella Costruzioni 127 (1938): 2-3. ("... [L]a giuria ha creduto di mortificare le vuote rettoriche per premiare invece i temperamenti più vivi, più sensibili, più aderenti a quel clima di orgogliosa modestia che dovrebbe essere elemento indispensabile dell'architettura civile italiana." Ibid., 3.)

83 Zanuso-Albricci's resembles a comfortable lodge. Otherwise, the plans are mostly regular, of a large scale, have multiple floor planes in a vertical extrusion of the ground plan, and possess an institutional feeling. A notable exception, mentioned by Pagano, is the design by Carlo Biaggi, who was a first-year student at the Milan Polytechnic and designed a large but airy project, with program contained in small cubes suspended under an expansive metal shed. Pagano, "I littorali dell'architettura," 3.
the artist," namely "the constructor who considers the technical reality with all his attention, and the architect who does not forget aesthetic control and who does not abandon himself to banality or conventionalism." A second key theme is his praise of their deference to the alpine vernacular. He praised Zanuso and Albricci for their use of materials, resorting to stone and wood as well as metal and glass; and he wrote that the plan was "lively and full of a character proper to the inn," but composed with a "vigilant modesty."

In praising the students' use of vernacular forms, Pagano echoed the theme of his own studies of vernacular architecture, which had been publicly exhibited in a suite of his photographs at the VI Triennale, in 1936. Pagano had distinguished the tone of the exhibition from any impulse to sentimentalize the vernacular by presenting the photos arranged in grid patterns, which encouraged the comparison of different approaches to common building types, asserting the "rational" character of these types due to their refinement over time, rather than their decoration, inventiveness, or national

84 "I vincitori, G. Albricci e M. Zanuso della Scuola di Architettura del Politecnico di Milano, hanno presentato un progetto studiato con chiarezza costruttiva e controllato da un senso di composizione encomiabile. Essi hanno immaginato una struttura muraria a pietrame, con completamenti di legno e con un rivestimento esterno di lamiera di alluminio . . . . In questo progetto noi vediamo espresse con convizione e con un certo spirito di indipendenza le migliori qualità del costruttore e dell'artista: il costruttore che considera con tutta l'attenzione la realtà tecnica e l'architetto che non dimentica il controllo estetico e che non si abbandona alla banalità o convenzionalismo." Pagano, "I littorali dell'architettura," 3.

85 "Negli altri progetti la giuria ha cercato appunto di premiare queste qualità, di scoprire gli allievi che diffidavano delle solite leggi rettoriche, che si controllavano nelle facili tentazioni, che componevano con scaltrezza, con vigile modestia, con attenta padronanza di gusto artistico e di sensibilità costruttiva." Ibid.
symbolism. In his exhibition of the vernacular, Pagano pointed to a manner of representation that would, he believed, sustain a manifestation of rationalism in architectonic form but evade the predictable critiques that Rationalism had begun to evoke by the mid-1930s.

The Technical and Bureaucratic Architecture Culture of Wartime and Postwar Milan, 1938-1951

Marco Zanuso, who had entered the Italian naval forces in 1939, spent long periods of time away from Milan, serving on cruiser ships. Upon his return from service in late 1943 or early 1944, he became involved in Partisan operations. During this time, he was close to members of BBPR, who had supported fascism during the 1930s, but reversed their position before the War, after the imposition of racial

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86 Dennis Doordan interprets Pagano's exhibition in these terms, and adds that before Pagano, the architect Enrico Griffini had mentioned vernacular architecture in his book Costruzione razionale della casa ("rational construction of the house") (1932); "like Pagano, Griffini admired the functionalist basis of vernacular architecture." Doordan, Building Modern Italy, 144.

87 Doordan: "In the 1936 Triennale, Pagano tried to promote the study of an earthy, populist vernacular tradition as a valuable corrective to the exoticism and abstraction he found so distasteful in the work of his colleagues." Ibid. See also the exhibition catalogue: Giuseppe Pagano, Architettura rurale italiana (Milan: Hoepli, 1936).

88 Marco Zanuso, "La Resistenza," 2. "... [W]e united with the partisans in the mountains by the lake until it was possible to descend into Milan and finally at Milan recover contact with friends and with architects ... and it was not over; the struggle again, this time not more stupid and senseless but equally cruel, difficult, and hidden. ..." Elsewhere in his memoir, Zanuso describes taking care of the apartment of Gabriele Mucchi, a painter and former classmate, during the German occupation, and alludes to "le staffette in bicicletta," the bicycle relays that maintained communication across northern Italy during the Resistance, notably at Modena, where bicycles were famously banned for this reason. Ibid.
laws had compelled Ernesto Nathan Rogers, who was Jewish, to abandon his support for Fascism and, eventually, to go into exile. The imposition of racial laws was a decisive moment in the politics of all of the firm's members, who would be affiliated with the Giustizia e Libertà movement in Milan, during the War.

The BBPR members' activities culminated in the arrest and deportation of Banfi and Belgiojoso, in 1944. In his memoir, Zanuso mentions helping Julia Banfi (later a secretary at Domus and Casabella-continuità) burn papers in the Banfi apartment. Banfi and Belgiojoso were accused of spying, imprisoned in Italy for a few months, and deported to Mauthausen, the concentration camp near Linz, Austria. Banfi, along with Giuseppe Pagano (who was arrested under

89 From Bonfanti, Citta' Museo ed architettura, A135. Bonfanti describes the BBPR's antifascist contacts as "liberal-crocean gobettian" (referring to Benedetto Croce and Piero Gobetti, and their respective versions of objection to fascism). He characterizes their fascism as "left wing," and mentions Ernesto Treccani, founder of the journal Vita Giovanile (later called Corrente) and Raffaele De Grada. (Ibid.) Bonfanti also mentions the BBPR's acquaintance with Elio Vittorini, Albe Steiner, and other left-wing antifascists during the late 1930s.

90 The BBPR, which has been linked by historians to the international Giustizia e Libertà (justice and liberty) movement in wartime Milan, had continued to produce architecture in the early 1940s. Since Rogers was Jewish, the firm published projects, and participated in exhibitions (even abroad), as "BBP," while Enrico Peressuti, Gian Luigi Banfi, and Lodovico Belgiojoso, each served briefly in the army (Belgiojoso in 1940, Peressutti in 1941, Banfi in 1943). Belgiojoso, a father, was discharged after a few months because of the "law of four children." All three had done compulsory military service in 1932–1934. Rogers, born to an Italian mother and English father, was a British citizen through the 1930s, and led a peripatetic life although he attended high school in Milan beginning in 1921, at the Liceo Parini, where he had met Banfi and Belgiojoso, and where all had Antonio Banfi as a teacher. Citta' Museo ed architettura, A135-7; A140 See also Ernesto Nathan Rogers's discussion of this period in Esperienza dell'architettura (Milan: Skira, 1997).

91 Marco Zanuso, "La Resistenza," 2.
different circumstances), died at Mauthausen during mass executions in April, 1945, weeks before the camp was liberated by American forces.92 Following the occupation of Milan by German forces in September 1943, Rogers, who at one point was arrested with Belgiojoso, had fled to exile in Switzerland after a brief incarceration.

Although Italy had entered the War in 1940, it was a few years before the impact of the war was widely felt among those who remained in Milan.93 Ties among architects and artists, and between these cultural producers and political groups, had already existed under Fascism; and these continued to develop during the War. The architect Eugenio Gentili Tedeschi, like Ernesto Nathan Rogers, was Jewish, but of the same age as Zanuso (who was not Jewish). Gentili Tedeschi spent part of the war in hiding in Valle d’Aosta, helping to design weaponry for the Partisan forces who played a key role in preventing a German

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92 Belgiojoso was freed and repatriated. Bonfanti, Città Museo ed architettura, A135-7.

93 Italy had gone to war in Ethiopia in 1935; in Albania in 1939; and entered the second World War in 1940, signing the "Pact of Steel" with Germany in May 1939, in Milan. Despite rationing, separation from loved ones, sporadic violence, and disturbing news reports, many in the city would live a semblance of normal life. The architect Cini Boeri, who would graduate from the Milan Polytechnic in 1951 work for Marco Zanuso during the 1950s, describes continuing to attend grammar school in Milan during the War. Cecilia Avogadro, Cini Boeri architetto e designer At the Milan Polytechnic, classes continued, but some faculty members who were Jewish or who had expressed antifascist sentiments lost their positions after 1938. See Annamaria Galbani "Antifascismo e resistenza nel Politecnico di Milano." In Il Politecnico di Milano nella storia italiana 1914-63 (Bari: Cariplo-Laterza, 1989), 268.
retreat into France. Details of Zanuso's particular occupations as part of the Resistance have not yet been published, but the example of Tedeschi suggests that for architects who remained in Italy, wartime brought certain technical tasks, and a culture of collaboration and fraternity, as well as heartbreak, in addition to political activities and other experiences. For others, such as Rogers, the War meant exile, and an occasion for introspection and the development of theory.

After the War, Zanuso was part of a group of Milanese architects who had formed the "CLNAI" (the "National Liberation Committee of Italian Architects"). The CLNAI was a division of the provisional administration known as the CLN ("National Liberation Committee"), a formal entity of the Italian partisans which, having earned legitimacy in the eyes of the Allied forces, was poised to become the new structure of government. Briefly, in 1946, the CLN was an extension

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94 In 1938, Gentili Tedeschi, who had been in school at Turin, left that city after his father was fired because of the racial laws. While the rest of his family fled from their native Turin to the Val d'Aosta, Tedeschi settled in Milan, where he was able to pass his final university exams with distinction and to find work in the office of Gio Ponti. He served as a courier for Resistance presses in Turin until, amid violence in the wake of the armistice with the Allies (September 8, 1943), he went into hiding. A colleague in Gio Ponti's office helped Tedeschi to avoid capture. http://www.jewishpartisans.org/t_switch.php?pageName=mini+bio+short+bio+l&fromSomeone=true&parnum=46 [Accessed May 18, 2010]. http://www.iltempoinsorte.it/gentilitedeschi_en.html [Accessed May 17, 2010].

95 Marco Zanuso, "La Resistenza," 2. In his memoir, Zanuso writes of seeking a position of influence for architects, after the War. "[T]he destructions appeared as a positive occasion because our interventions could be articulated according to strategies of large scope that would lend themselves to the programmatic economic revival and management of the territory, urban reconstruction following a vision for us more modern, more free, and assisted by a broadly participatory democracy."
of the interim government. The architects in CLNAI would form the nucleus of the longer-lived "Movimento di studi per l'architettura" ("Movement for the study of architecture"). After an interim government officially replaced the CLN, the MSA was formed in April 1946, to foster contact among architects, and to conduct research projects. In the proclamations that attended the MSA's founding, the architects also expressed intended to resume the agenda of Rationalism, with particular emphasis on the examples of Giuseppe Terragni (who died from illness at Como, following military duty, in 1946), Giuseppe Pagano, and others.

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97 Franco Albini was the CLNAI/MSA's first president and was involved, meanwhile, with the official process of "epurazione." Rossari, "L'attività professionale tra cultura e tecnica," 28. Enrico Peressutti (of BBPR) was in the "Commission of Public Works" of CLN Lombardia. Transcripts of a 1945 conference on housing and Reconstruction are included in Fabrizio Brunetti, Architettura in Italia negli anni della ricostruzione (Florence: Alinea, 1998).

98 Rossari remarks that the MSA aspired to be, at one and the same time, a professional organization and a tendenza, or cultural "tendency." Rossari, "L'attività professionale tra cultura e tecnica," 28. ("[C]he proponeva da un lato di affermare il ruolo dell'architettura razionalista, in continuità con i gruppi avanguardia degli anni Trenta, dall'altro di porre come polo culturale capace di catalizzare nuove forme di organizzazione degli aderenti e di gestire ricerche in campi specifici. In pochi parole il MSA si proponeva come organizzazione professionale di 'tendenza,' ponendosi in ideale continuità con la linea che prima della guerra aveva raggruppato gli architetti razionalisti attivi nell'area di Milano e di Como.")
Following the formation of the MSA, some architects continued to aspire to intervene politically. There is little specific information about Zanuso’s political beliefs at this time, but he was among a group of architects from the MSA who joined other Italian architects in an attempt to form a national federation of architects whose mission would be to develop policy in accordance with their research in architecture. This organization, called the FAIAM, lasted only until 1951. The remaining vestige of these political efforts was the MSA, whose evening debates in Milan were often quoted in Casabella-continuità during the 1950s. However, by 1951, the MSA was strictly a cultural organization, not a political one.


The Villa Scotti, designed by Marco Zanuso with Giovanni Albricci and built in 1946-1947, was one of two of Zanuso’s projects that were built after the War. (The other was the Apartment Building on Via Senato, in Milan; see Chapter 2.) The house was built while Zanuso, as an editor of Domus, participated in Ernesto Nathan Rogers’s program for the home. Rogers, as editorial director of the journal (subtitled "la casa dell'uomo" during the period 1946-1947) devoted the journal to a study of the home that might respond to the present moment and,  

99 Brunetti, Architettura in Italia negli anni della ricostruzione. The organization would draw members from the MSA, plus the APAO in Rome and the organization in Turin dedicated to Giuseppe Pagano. Following the elections of 1948, hopes that the CLN would simply become the new government, with MSA architects already insinuated into key positions regarding building and infrastructure, were dashed.
at the same time, serve as the starting point of a program for architecture, after Fascism. By inviting consideration of the home as a shelter and sanctuary, Rogers's program was meant to respond to the emotional trauma of the War and its aftermath. Meanwhile, through its focus on the singular dwelling, be it an apartment or detached house, Domus la casa dell'uomo made a decisive break from the collectivity that had been the default under fascism. Zanuso, like Rogers and other architects, would study the home in relation to the appropriation of free time through efficient planning, and the individuals liberal use of that time. They turned to mass production as a means to distribute these amenities to as wide a population as possible. In this context, the Villa Scotti reflects Zanuso's identification of the home as a field of intervention for the design of an emblematic architecture of the time, a figure that could represent the enlarged freedom of the individual in the new democratic society.

If the Villa Scotti is hypothetically approached as a prototype for a single family home along these lines, several features are indicative of both a contemporary outlook, and Zanuso's prior experiences. Zanuso and Albricci made a point of orienting the interior to the landscape through the arrangement of the plan and the distribution of rooms in relation to the view of Lake Maggiore. They included a kitchen designed for efficiency, following the method outlined in his book La cucina (1945), a manual on kitchen design and planning. They explored the possibilities for the rationalization of building construction, which Zanuso would write about in his 1946
articles on prefabrication, for *Domus la casa dell'uomo*. They designed furniture pieces for custom manufacture, and in the same period, Zanuso developed his first designs for mass production. As in their 1938 *Albergo Rifiugio*, Zanuso and Albricci employed a vernacular form, taking advantage of its frank pragmatism and ready-made integration into its regional context. By combining this form with the characteristics of a modern building, Zanuso and Albricci presented the *Villa Scotti* as a figure for an architecture that could remain true to its origins while enjoying the modern lifestyle that finally appeared to be a possibility, in post-Fascist Italy.

Perhaps the most striking feature of the *Villa Scotti*, to a reader of *L'Architecture d'AUjourd'hui*, where it was published in June 1952, would have been that it was not obviously a modern villa. Even the authors, in their brief description of this "chalet de montagne," gave little explanation of its modern features, apart from its metal stair.\(^{100}\) According to the project files, the *Villa Scotti* was a

\(^{100}\) The architects describe an overall interior composed of converging blocks: entrance and hall and stair; the service area (including kitchen and laundry with a separate entrance); and the bedrooms. Marco Zanuso and Gianni Albricci, "Chalet de Montagne," *L'Architecture d'AUjourd'hui* 41 (Jun 1952): 60. Zanuso and Albricci also designed furniture for the house; their custom bed, table, and vanity appears in "Elementi" *Domus la casa dell'uomo* 213 (1946): 14.
However, Zanuso and Albricci's notes, in the published article, present the house as a new building; and in fact, their work on the house had turned the barn into a plausible modern dwelling.

The project was for a weekend home and the site was a hilltop near Premeno, a hilltop village on the Western shore of Lake Maggiore. The plan provided for cooking, resting, and relaxing; the living room and two of the bedrooms had views of the lake. Several features of the design illustrate the architects' efforts to accommodate the program and remain within the outlines of the original house while making the most of the relationship of the new house to the lake. To make the bedrooms as large as possible, the architects maintained the overhang at the upper level, on the south and east elevations, in a new floor made of reinforced concrete, cantilevered from the stone wall below. The splitting of levels at the second

101 Among the earliest project drawings is one of an existing barn with two levels (~6.5m x 12.75m in plan), including a stone base housing a stall below and a wooden hayloft above. The architects excavated to create a basement, and added a short outbuilding at ground level to house the kitchen. They also rebuilt the stone base and upper assembly; but they constrained the design to the dimensions of the barn. The initial drawing in the microfilm set for the project, dated October, 1944, illustrates the existing structure with the "stalla" on the ground floor and "fienile" (hayloft) above, reached by a ladder. Drawing SPV1, "Progetto di max di rustico per il sig, SCOTTI Francesco da erigersi in Premeno località PIAN DI SOLE." FMZ M2 Microfilm 1, Fondo Marco Zanuso, Archivio del Moderno, Mendrisio.

102 Verbania, located to the north and West of Milan and near the Swiss border, was an area of intense Partisan activity during the War. For a memoir of wartime dislocation to the region, see Cecilia Avogadro's interviews with Cini Boeri, in Cini Boeri architetto e designer (Milan: Silvana, 2004).

103 Drawing SPV20, "Progetto di max di rustico per il sig, SCOTTI Francesco da erigersi in Premeno località PIAN DI SOLE." FMZ M2 Microfilm 001, Fondo Marco Zanuso. FMZAMM.
floor allowed the accommodation of one bedroom under the lower wing of the asymmetrical roof, on the land side of the building. The other bedrooms, on the lake side, were on a level a few steps higher, so that the building opened toward the view in section.

The house was mainly a wooden structure, but the architects used a patchwork of construction methods in different parts of the building. The roof was replaced with a new, light wooden truss structure, using iron plates at the joints and employing a single I-beam for the wider span at the kitchen end of the building. The bottom chords of the trusses doubled as ceiling joists for the upper floor. The architects made a drawing of the exterior wall assembly. The walls were made of battens of six "types," each with a distinct profile, in a rudimentary but distinct instance of rationalization in the conception of the constructed wall.104

The Villa Scotti appeared in L'Architecture d'Aujourd'Hui as part of a special issue on Italy, in which Zanuso was editor of the section devoted to the private home. In his comments, Zanuso stressed the freedom of the architect designing a private home, and the preeminence of the parts of the home, as channels of ideas from the canon of modern architecture, and as objects of experimentation and

104 "I montanti esterni in legno, per il fissaggio delle perline, di cm 12x14 di sezione, hanno 6 tipi diversi di sezione. Alcuni di essi, hanno sezione variabile, nei veri tratti della loro lunghezza. Per rendere più evidente il suo verdersi di queste sezioni, sono stati disegnati, qui a fianco, dei piccoli schemi dei prospetti, che portano segnante anche le lunghezza dei vari tratti a sezioni costante." The beam ("putrella") was presumably steel according to its documentation, "220x98," 4.20m length. From notes on drawing SPV 21. FMZ MZ MICROFILM 001 Villa Scotti Premeno. Fondo Marco Zanuso. FMZAMM.
variation.\textsuperscript{105} He characterized the house as a program in which the architect had exceptional freedom to express his point of view.\textsuperscript{106} He drew a distinction between older architects, who already had a mature language set in their preferred materials, and younger architects, who were still testing the elements individually. He contrasted this attitude to the young architect's "desire to finally confront those problems of the large baies or the pans de verre, the brise-soleil, of the apparent skeleton, the pilotis, etc."; and he concluded that the tension between these groups, or these attitudes, gave "vitality" to Italian architecture. Just as significant is his characterization of the architect's experimentation as, in itself, an act of freedom; "These different means of expression converge toward a single end: the need of man to try new experiences and measure himself against them."\textsuperscript{107}

Zanuso's enumeration of the parts of the building raises the question of the composition of the house from a similar set of parts. In the Villa Scotti, the hearth, stair, and kitchen were points of focus. The hearth was set in a niche that forms a focal point on the ground floor. This niche was set opposite large windows facing the direction of the lake, with benches enclosed by masonry walls and a floor that is depressed a few inches from the main floor.[fig. 1.14]  

\textsuperscript{105} Marco Zanuso, "L'habitation individuelle en italie" L'Architecture d'Aujourd'hui 41 (Jun 1952): 60.
\textsuperscript{106} Ibid. "Of all the architect's forms of professional activity, the theme of the individual house, the villa, the vacation chalet, is yet the one in which, these days, one can give maximum freedom to one's inspiration."
\textsuperscript{107} Ibid.
The chimney was exposed to view, right up to its penetration of the roof. The stair was also exposed to view, carefully detailed in metal and carpentry. It ran along one wall behind the chimney, in the same double-height vertical space, to a landing which opened onto one bedroom, followed by a few steps to the two additional bedrooms. The kitchen was tucked into a corner of the main floor, but it was meticulously planned, with its equipment packed into the small space, arranged according to a progression from storage to preparation to cooking with the cabinets, double sink, stove, and oven tracing a clockwise path around the perimeter.[fig. 1.15] A section drawing on the same sheet shows a grille and ventilation fan, underscoring the priority of function.

In fact, these parts—the hearth, chimney, and kitchen—had been the subject of an manual in a series published by Domus Editoriale.108 Each volume in the series, which was edited by Carlo Pagani and Lina Bo, focused on a part of the home, including bookshelves, lighting, tables, seating, curtains, living rooms, and the "green" element in the home.109 The Villa Scotti employed variations of the chimney, hearth, and kitchen, that were documented in these manuals.

108 The stair was the subject of a journal article in a similar style, "La Scala nella casa" Domus 179 (Nov 1942): 466-473. (No author is named.)

109 Titles in the series included Libri nella Casa (1945), by Vito Latis; Camini, by Mario Tevarotto (1945); Studi nella casa (1945), by Vittorio Candolfi; Illuminazione della casa, by Luigi Carlo Ouvieri (1946); Tavoli e piani d'appoggio, by Luciano Canella and Renato Radici (1948); Sedie divani poltroni (1950), by Vittorio Borachia and Carlo Pagani; L'elemento "verde" e l'abitazione, by Luigi Figini (1950); Le tende nella casa, by Cini Boeri (1952); and Soggiorni (1954), by Vittorio Borachia and Carlo Pagani.
The kitchen design demonstrated the kitchen design method outlined in *La cucina* (1945), Zanuso's contribution to the Domus Editoriale series. In *La cucina*, Zanuso argued for the efficient planning of kitchens as a means of modernization; he evaluated the status of mass production of kitchens; and he provided examples from recent European and American journals, and his own analytical plans and diagrams, to illustrate the concepts and provide models to the practicing architect. The sections of the book addressed the kitchen part by part, including the cabinetry, refrigerator, ovens, preparation tables, and dishwasher; they dealt with kitchens of various sizes, from the niche to the large institutional kitchen; and they discussed concepts of efficiency and mechanization.

*La cucina*, with its consideration of dimensions and labor-saving techniques, was a further iteration of the theme of "scientific

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111 A list of credits indicates that the illustrations were drawn from Architectural Record, L'Architecture d'Aujourd'hui, Bygge Kunst, Domus, House Beautiful, House and Garden, Innen dekoration, Moderne Bauformen, Svenska Hem, The Architectural Forum and The Architectural Review. Also cited are the books *Ordine e destino della casa popolare* by Diotallevi and Marescotti; Bauhausbauten Dessau by Walter Gropius (Monaco: Langen); Geoffrey Holme and S.B. Wainwright, *Decorative Art* (The Studio, London, 1930); Le Corbusier and Pierre Jeanneret 1929-1934 (Zurich: Girsberger); and Sadie Speight and Leslie Martin, *The Flat Book*. 
management" and the rationalization of construction, in Italy.\footnote{Previous articles on industry-related themes can be observed in Domus as early as 1940. See, for example, the unsigned article "Tipi" ("Types"), advocating the development of types for furniture, in Domus 151 (1940); "Che cosa è la razionalizzazione" ("What is rationalization") \textit{Domus} 193 (January 1944): 2-8. The article was signed "C.I.S.A.V.," an organization of glass manufacturers. These articles were part of a broader interest in scientific management techniques, which had been introduced into Italy in the early 1930s. The casual mention of Frederick Winslow Taylor and Frank Gilbreth, in a 1931 book review in the journal Edilizia Moderna, is indicative of the excited reception of these concepts by some industrialists. [Unsigned], "Un libro che colma una lacuna," \textit{Edilizia Moderna} 3 (1931): 36-39. In addition, by including diagrams and instructive examples in order to provide a resource for architects in Italy, \textit{La cucina} and the other books in the Domus Editoriale series were similar to the series of typological manuals published by Ulrico Hoepli, and to the \textit{Manuale dell'Architetto}, by Mario Ridolfi, published in 1945, which together provided information, including technical details, to aid architects involved in construction projects in the postwar Reconstruction. Sigfried Giedion's \textit{Mechanization Takes Command} (New York: Oxford University Press, 1948.).} Citing research into standard dimensions for equipment, and distances between equipment, as well as technical advances, he noted that by coordinating technical advances to the needs of modern life, it would be possible to give the kitchen "a new aspect."\footnote{\textit{La cucina}, 7-8. "Solo quando le esigenze della vita moderna da un lato, e il perfezionamento tecnico dall'altro determinarono una contrazione e nello stesso tempo una specificazione degli spazi nelle abitazioni, la cucina venne ad acquistare un aspetto completamente nuovo."} Mass production of modern kitchens could make this new way of life broadly accessible in Italy.\footnote{Ibid. Zanuso alluded to the need to coordinate dimensions and mass produce the kitchen, advocating the standardization of the kitchen for low-cost implementation in new construction. His model was the American market, where complete, well-designed kitchen suites were available, and suggestive of further development.}

\textit{La cucina} was an elaboration of an initial essay by Zanuso whose title, "Non dimentichiamo la cucina" ("Let's not forget the kitchen") has been described as a reference to the work of Giuseppe Pagano, exemplified in the exhibition "Tecnica dell'abitazione" ("technique of
habitation"), devoted to the planned interior, at the VI Triennale (1936). In this regard, La Cucina was a product of the Rationalist discourse of the late 1930s, and the Villa Scotti, with its kitchen, marked Zanuso's transposition of that theme to a domestic architecture in the postwar context.

The VI Triennale provides a snapshot of architecture in 1936, ten years after the first claims of Rationalists to define Italian modern architecture. The spectrum of subject matter at the show demonstrates that the home—which had been a frame for visualizing modernization and a standard in exhibition culture in Italy, as elsewhere in Europe, since the turn of the century—had gained ground as a reference typology. Themes of the five sections on architecture, in the Triennale VI, included construction technology and building materials; urbanism; interior design and furniture, surveys of national and international architecture; and a photo essay on Italian vernacular architecture. The curators of these sections were Giuseppe Pagano, Piero Bottoni, the firm BBPR, Agnoldomenica Pica, and

115 Marco Zanuso, "Non dimentichiamo la cucina." Domus 197 (1944): 183-188. The connection between Zanuso and Pagano is reported by the historian Alberto Bassi, who cites "Non dimentichiamo la cucina," in these terms, in his study of Giuseppe Pagano's approach to industrial design, in Giuseppe Pagano (Rome: Editori Laterza, 1994).

116 The historian Dennis Doordan has stressed the importance of this show: "No single building, article, or event serves as well as the VIth Milan Triennale of 1936 to illustrate the multiple levels on which architects responded to the challenge of building modern Italy." Doordan, Building Modern Italy, 143.
Guarniero Daniel (who co-curated the last section with Pagano), respectively.¹¹⁷

Pagano's conception was outlined in his introduction to the exhibition catalog, where he offered a theoretical elaboration of the home as a quintessential cultural project, linking organization and planning to "spiritual" needs, asserting the centrality of the home as the space in which its various aspects converge and conflict with one another, and are therefore available for resolution. "[T]he house where one lives defines his spiritual world, his practical sense of life and the moral significance he attributes to this life." Between "a few walls" are "the most material functions of physical existence" but also "the most spiritually elevated, of contemplation, repose, affection, or intellectual work," hence the sense of "order or disorder," "simplicity or appearances," "intimate family life or an unregulated existence."¹¹⁸

Citing the variation of the house from one to another cultural period, Pagano asserted that each epoch witnesses a gradual tailoring

¹¹⁷ Doordan, Building Modern Italy, 143.

¹¹⁸ Giuseppe Pagano, Tecnica dell'abitazione (Milan: Hoepli, 1936), 10. ("La casa in cui l'uomo vive definisce il suo mondo spirituale, il suo senso pratico della vita e il significato morale che egli attribuisce a questa vita. Nella casa si fondono, entro pochi pareti, le funzioni più materiali della esistenza fisica assieme a quelle spiritualmente più elevate, della contemplazione, del riposo, delle affezioni o del lavoro intellettuale. Il senso di ordine o di disordine, l'amore della semplicità o della apparenza, il bisogno di quiete o di distrazione, il sentimento di una vita intimamente familiare o di una esistenza sregolata. Il grado di sensibilità estetica dell'individuo e la capacità tecnica di una civiltà sono facilmente leggibili in un alloggio, assai meglio che in un documento ufficiale.")
of the house to its occupants.\textsuperscript{119} To frame the task of his own time, Pagano wrote of the "architectonic image"; through the project, the architect can bring the aesthetic concerns of the spiritual outlook into alignment with the technical capacities of the time.\textsuperscript{120} Pagano developed the metaphor further by comparing the project to a "lens" through which the architect can bring the spirit of the time "into focus." "Coerenza" ("coherency") was the goal of architecture.\textsuperscript{121}

Pagano's "Tecnica dell'abitazione" focused on the individual dwelling, in contrast to the monumental scale of the typical state building projects of the Regime; but he maintained its totalitarian goals as a theme. To present the house as the architectonic construction of an ideal fascist individual, he included a quotation in which Mussolini spoke of citizens, not as "numbers" but in terms of

\begin{itemize}
\item \textsuperscript{119} Pagano, Tecnica dell'abitazione, 9. Pagano writes that the house is therefore the preeminent index of the level of aesthetic sensibility in a civilization.
\item \textsuperscript{120} For Pagano, the potential of architecture to mediate between the user and his aesthetic desires is a precondition of the very possibility of artistic development in modern life, the possibility "of a relationship of coherency between the spiritual world and the real one, between the ideals of fantasy and the sculptural values of the architecture that represents them." Ibid.
\item \textsuperscript{121} Pagano points to a "correspondence" between aesthetic and technical, physical surroundings and spirit, in various manifestations of architecture and the state of civility in the diverse epochs. Man is a lens, the world of the spirit is an object, architecture is an image. Coherency is when man brings the image of the spirit world into focus."Se paragoniamo l'uomo a una lente, il mondo dello spirito all'oggetto e le manifestazioni architettoniche all'immagine, diremo che stato di coerenza vi è quando l'uomo 'mette a fuoco' l'immagine." Ibid.
\end{itemize}
their function in the state.\textsuperscript{122} To this Pagano added, "Functional citizens, functional architecture."\textsuperscript{123}

Pagano went on to consider the projection of these intentions in "the particular sector of architecture" and from that followed "the enormous social interest represented by the dwelling of the middle class and the greater part of citizens who possess neither villas nor palazzos, who live in rental housing or in a condominium."\textsuperscript{124} Such housing entails huge expenditures for hygienic, functional, and aesthetic necessities of living, and is exploited by commercial speculation.

It follows, Pagano argued, that furniture should be rethought and built in its basic form as a utensil, with its use in mind. He also suggested that shelves and armoires were destined to become part of the fixed structure, not movable furniture, serving as partitions between different parts of the space. "The modern house must respond to the needs of the functions that take place in it: work (services,

\textsuperscript{122} Pagano, \textit{Tecnica dell'abitazione}, 10. "'Noi siamo per il senso collettivo della vita e questo noi vogliamo rinforzare a costo della vita individuale; con ciò noi non giungiamo al punto di trasformare gli uomini in cifre, ma li consideriamo soprattutto nella loro funzione nello stato.'"

\textsuperscript{123} "Cittadini funzionali, architettura funzionale..." Ibid.

\textsuperscript{124} "Se noi riferiamo questo concetto politico generale nel settore particolare dell'architettura, vedremo subito profilarsi l'enorme interesse sociale rappresentato dalla casa di abitazione dell'uomo medio e della gran massa di cittadini che non possiedono nè la villa nè la palazzo e che devono abitare in città nell'alloggio di affitto o nell a casa in condominio." Ibid., 10.
kitchen, wardrobe), fun and sport (terrace and garden), community life (sitting room), and rest (bedroom)."^{125}

Technical material, such as dimensioned drawings of furniture, plans, and construction details, was conspicuously abundant in his catalogs, which were published by Ulrico Hoepli.^{126} With these explicit prescriptions, Pagano provided a complete definition of functional architecture in the ambit of the house as the scene of everyday life.

In a similar vein, the method outlined in Zanuso's La Cucina promised to inscribe routine activities into the plan. The tone was set, in part, by Zanuso's emphasis on the updating of kitchen equipment and layout. Like Pagano's account of the home, Zanuso's account of the kitchen was unsentimental. Zanuso observed, reviewing the existing kitchen, that for the lower classes, the kitchen was often the only room in the home that could accommodate an entire family, sitting together. In homes of the upper classes, the kitchen

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"Il mobile deve essere pensato e realizzato nella sua struttura fondamentale come un utensile, in funzione del suo uso, tenendo presente che scaffali e armadi sono destinati a scomparire come elementi 'mobili' per divenire parte integrante fissa dell'abitazione, diventando anzi spesso pareti divisorie fra i diversi ambienti dell'alloggio. La casa moderna deve rispondere alle esigenze dell'uso che in essa l'uomo svolge: lavoro (servizi, cucina, guardaroba), svago e sport (terrazze e giardini), vita in comune (soggiorno) e riposo (letto)." Pagano, *Tecnica dell'abitazione*, 11.

^{125} A list of publications issued by this Milan-based publisher, encompasses several themes of modernization. From an initial publication of illuminated manuscripts from the 1600s (1930), the publisher moved to its first construction manuals on technical themes; Alberto Sartoris's introductory survey of Rationalist architecture (1932); speeches and writings of Mussolini (1934); a study of the sociology of fascism as a system of government; more technical manuals; Agnoldomenico Pica's survey of modern architecture in Italy (1941); and a handbook on English for commercial transactions.
was a servant space, notwithstanding the presence of equipment, heat, fumes, and various epiphenomena of cooking.\textsuperscript{127}

Zanuso made no mention of connotative value in the pieces of furniture involved, not even in his review of the existing kitchen. To plan the space for use, he assigned each piece a position in a sequence. The set of objects represented for the use of the kitchen in general, and the individual object stood for an individual activity in the kitchen's use. Oven, stove, cabinet, table, were all considered in terms of how they would be used and how they should relate to one another, not as familiar objects whose presence evoked tradition or sentiment.\textsuperscript{128}

The effect of this calculation can be appreciated if one tries to imagine a family gathering in the Villa Scotti kitchen. The chairs at the table were given no space to be pulled back, sat on by more than one person, tilted back into a resting position, or involved in other attitudes of relaxation around the table, especially during the preparation of food. The functional treatment of the components had the effect of turning them into signs of their use.

\textsuperscript{127} Zanuso, \textit{La Cucina}, 7. [My paraphrase.]

\textsuperscript{128} Zanuso's kitchen-planning method consists of several steps: the "analysis" of work, "preparation," "sequence," the "execution" of work, the "concentration" of tools, and the "simplification" of circulation. The aim of "analysis" is, Zanuso explains, "to classify the objects in categories," "define the functions," "establish the plan." Preparation refers to a space allotted to preliminary stages in cooking. The ideal path of work is a straight line, with equipment and tools placed in order of their use. The final step allows for the elimination of redundancies and other complications once all the above have been accounted for. Zanuso, "Non dimentichiamo la cucina," 184.
However, the emphasis of La cucina was not on a single ideal kitchen, but rather on design for change, especially the capacity to analyze existing habits and remake them according to a modern pattern. In the introduction to La cucina, Zanuso characterized the kitchen as a technical problem of planning; but although he regarded the planned kitchen as a symbolic attribute of a modern architecture, he also confronted it as a cultural problem. In his view, the state of the Italian kitchen was a result of the persistence of conventions from the past, but its physical configuration was intimately bound up with habits of use that informed an entire way of life.\(^{129}\) It followed that change in the kitchen could afford a new way of life.

A Postwar Home

As a modern home in a natural setting, the Villa Scotti was similar to two unbuilt projects by Zanuso, "La casa ideale," (1942) (the "ideal house") and the "Casa e natura," (1946), in which he tested concepts for the individual home, responding to a series of iterations of visions of the home, among a group of Milanese architects, particularly the ideas of Ernesto Nathan Rogers. During the early and mid-1940s, Rogers developed a theory of the home in

\(^{129}\) Zanuso observed that the Italian kitchen often doubled as a gathering place, in the past and continuing to the present day; meanwhile, the arrangement of equipment was usually arbitrary so that cooking required a "precision of work, an instinctive ability in improvisation and ingenuity" ("una precisione di lavoro, una istintiva abilità di improvvisazione e di ingegnosità"); and with running water not always available, the kitchen posed problems of hygiene as well as fetching and storing water. Zanuso, La cucina, 7.
writing. His essays, mixing personal observations, psychology, and philosophical reflections on civil life, focused on the development of the home in response to psychological needs of security, with particular attention to the significance of art, beauty, nature, and the relationship among neighbors or peers, and between the individual and the collective. Rogers stressed the importance of the architect as an artist who could formulate responses to these needs in architectural form, and he mentioned prefabrication, in his formulations, as a means to distribute such modern homes throughout society.

The architect Piero Bottoni would write in his survey of Rationalism in his guide to architecture in Milan, in 1954, that Rationalism had suffered from a lack of in-depth research into the social content of architecture.¹³⁰ A similar concern seems to have motivated Rogers during the 1940s. Rogers had continued to advocate a functional approach to architecture since the late 1930s, in line with the ideas Pagano had articulated in Tecnica dell'abitazione, in 1936, to which Rogers and the other BBPR had contributed key demonstrations.

However, by the mid-1940s, Rogers had rejected the self-abnegating subject that had been the object of Pagano's "technique." Pagano had described the modern architectonic image as the reinterpretation of the home in such a way as to bring propinquity,

simplicity, and order into experience, in order to serve a regime that demanded a renunciation of individuality. By contrast, Rogers would emphasize subjective experience, focusing on sensations that would identify a specific place as home in experience and emotion, as the starting point for functionalism. This subjectivity was distinct from the individualism or creativity that had been maligned in the art and architecture culture of the 1930s, for it was in fact a kind of "intersubjectivity," the architects' ideal being understood to stand in for that of "anyone."

In effect, in his writings about architecture during the 1940s, Rogers took the problem of the dwelling articulated by Pagano, and reversed its priorities to approach it as the instrument of the individual relating to society rather than the society controlling the individual. "I want a house that looks like me, like my humanity," he wrote, in the program for Domus la casa dell'uomo (1946).131 This operation is perceptible in his "La casa dell'anonimo" essay of 1942 ("house for anonymous"), and it is even more explicit in the program of Domus la casa dell'uomo.

"La casa dell'anonimo" was an early articulation of the ideas in Rogers's program for Domus la casa dell'uomo. The essay appeared in the issue of Domus on the theme of the ideal house, "La casa ideale,”

131 Ernesto Nathan Rogers, "Domus la casa dell'uomo," in Esperienza dell'architettura (Milan: Skira, 1997), 81-84. "[P]are proprio che gli elementi costruttivi assumano le sembianze dell'abitante. Io voglio avere una casa che mi assomigli (in bello): una casa che assomigli alla mia umanità."(82)
in 1942. The editors of *Domus* at the time, the critic and writer Massimo Bontempelli and the architect Melchiorre Bega, had invited a group of architects to draw the house of their dreams. Marco Zanuso, too, took part in this exercise—as well as Gian Luigi Banfi, Lodovico Belgiojoso, and Enrico Peressuti—and so this intervention on the ideal house affords a comparison of Zanuso's thinking to that of Rogers, in 1942. Zanuso followed Rogers in imagining the house in terms of sensory qualities, but while Rogers described his house in words, and drew connections between privacy and neighborly relations, Zanuso articulated his ideas in an architecture project and focused on the architectonic description of psychological security through sensory qualities.

In his vision of the ideal house, Rogers described his house as a place to experience the world.

After the war it would please me to say a word in the ear of anyone like myself, something like, 'Move away from the debris, and build your house, it is time; you have mucked about enough with the Pyramids, Colosseums . . . see who you are and how much you are worth.' I would like to be true, to live, I want a house where that might be possible.

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132 Ernesto Nathan Rogers, "La casa dell'anonimo," *Domus* 176 (Aug. 1942): 333. Rogers is uncredited in the original. References to this essay will refer to its republication in *Esperienza dell'architettura*, 45.

133 "La casa e l'ideale" *Domus* 176 (Aug. 1942): 312. Editorial signed "Domus."

134 Rogers, "La casa dell'anonimo," 45. "Dopo la guerra mi piacerebbe dire una parolina all'orecchio d'ogni mio simile, pressapoco così: 'Scostati dalle macerie, e costruisci la tua casa, è ora; ti sei ginzillato abbastanza con le Piramidi, i Colossei e i Cupoloni, fa vedere chi sei e quanto vali.' Voglio essere vero, vivere; voglio case dove ciò sia possibile." Ibid.
He went on to compare the house to a "mother" or a "shell," a fixed point in a changing world, an embracing place of refuge. By extension, he argued for a "right" to a house, as natural as the fact that every man has a mother.135

Rogers characterized his ideal in terms of its occupant's relationship to the natural setting and to his neighbors. It was to be far enough away from anyone so he could sing out of tune without being heard, but close enough that he can wave hello; it would grow "from the soil like a plant" and admits nature at every turn; Rogers described "a piece of earth below and above, a piece of sky."136 The walls were boundaries of the external world, "not obstacles"; a wall could open or close like an "eyelid." Rogers compared the house to a body, and alluded to the relationship of neighbors as a kind of intimacy.137 Thus, in his description of the ideal house, Rogers wove together his fantasy of the house in terms of its relationship to

135 Rogers, "La casa dell'anonimo," 45. ("Madre mi è la casa come il grembo che mi protesse prima ch'io venissi al mondo, affettuoso asilo, tiepida dimora, alimentato da un solo impulso d'amore e dal medesimo sangue. Così ogni uomo abbia la sua casa per lo stesso diritto di natura che gli ha dato una mamma e per il dovere di ripetere il prodigio nei figli.")

136 Ibid. ("Questa è la mia casa ideale: lontano dalla tua, mi basti per cantare stonato e da te non udito, eppure così prossima ch'io ti possa salutare agitando le mani e tu mi risponda. Cresce dal suolo come una pianta ed è tuttavia sovrana sulla natura, prepotente orma d'uomo. Un pezzo di terra in basso, e in alto un pezzo di cielo: tra gli infiniti fiori, qualcuno profuma solo per me e, nella notte, un quadrato di stelle—tra le infinite—per me s'accende.")

137 Ibid. "Le pareti siano limiti al mondo esterno, non ostacoli: s'aprono tutte al di fuori, si chiudano, si socchiudano: occhi con palpebre e ciglia o, forse, pori che l'Universo respirino e gli umori nocivi trasudino. La mia casa è un corpo, come il mio corpo, custodia ai dolori e alle gioie, accanto al tuo confine."
nature, and its experiential qualities, and also in terms of a social situation and political atmosphere.

Zanuso’s text was considerably less poetic than Rogers’s, but there were distinct parallels. Just as Rogers emphasized the need of enclosure, Zanuso described the house in terms of diverse activities and ambient qualities. The plan and enclosure were designed to provide a variable degree of seclusion. Zanuso explained, “In my house I will be able to think and work alone in a more secluded place, and gather many friends in an illuminated space.”\(^ {138}\) The house was amply lighted and organized in a sequence of spaces in which, in spite of their varied enclosure, “at every point continuity is felt: in the vertical and horizontal planes, in the light, in the colors.”\(^ {139}\) Zanuso used the metaphor of the cell to describe the relative isolation of different parts of the plan "A nucleus, like the cell, that can enlarge together with the family; that can follow the becoming of the elements of this. Life will unfold in ample, bright spaces; in limited, secluded spaces."\(^ {140}\)

Much of Zanuso’s essay (and all of his drawings) were concerned with a physical description and list of technical requirements: stone walls, roof made of metal trusses and aluminum sheet metal; drainage, the location of utilities under a raised area adjacent to the kitchen


\(^ {139}\) Ibid., 328.

\(^ {140}\) Ibid. "Un nucleo, come la cellula, che possa ingrandirsi insieme alla famiglia; che possa seguire il divenire degli elementi di essa. La vita si svolgerà in spazi ampi, luminosi; in spazi limitati, raccolti."
and bathrooms; operable windows; the potential for enlargement; but Zanuso described the interior in terms of qualities due to differences in the amount of light and color.\footnote{Zanuso, "La casa ideale," 331. For instance, one caption reads, "The table where one eats, the divan, the armchairs, the raised carpeted area where one reads, or converses, or rests, are arranged in the brighter, more ample, more richly detailed, more colored zone." ("Il tavolo dove si mangia, il divano, le poltrone, il tappeto rialzato dove si legge, si chiacchiera, si soggiorna, sono sistemati nella zona più ampia, più luminosa, più ricca di elementi, di colori.")} Zanuso's house had two floor levels a few steps apart, and the roof plane was broken by the difference in height between the two volumes.\footnote{Rogers, "Domus la casa dell'uomo," 82.} [fig. 1.16] The plan was a broad rectangle. The living room and bedroom were at opposite ends of the house, with the kitchen between them and off to one side. The principle of organization more diffuse than the strict efficiency of the plan in \textit{La cucina}.

In his "Program" for \textit{Domus la casa dell'uomo}, Rogers once again sketched a set of priorities for the home. In addition to describing the physical qualities of the comfortable home, he characterized the home in psychological terms that would bear on both the individual's sense of security and his relationship to other men, and by implication, the character and texture of the society built up of such homes.\footnote{Rogers, "Domus la casa dell'uomo," 82.} Rogers focused primarily on qualities and patterns of experience. A house should be "warm in winter, cool in summer, and serene in any season to gather the family in harmonious spaces"; it
should include a corner for reading poetry. Rogers also affirmed the centrality of the home as an extension of the individual and an element of civilization. He wrote that "a man is not a man until he possesses such a house," and that "the problem is to form a taste, a technique, and a morality as terms of the same function." 

Adopting a different perspective, Rogers reflected on the etymology of various terms for "home." "Domus la casa dell'uomo" reflects the Latin "domus"; the English "home" which Rogers fancifully likens to "uomo" (Italian for "man"); and the French "chez moi" which suggests an individualized home. The house is supposed to be the mirror of human sensibility, a fundamental index of a culture.

As such, the house was meant to be available to all. Departing from prior accounts of the home that sought equality by abstracting the home from class, Rogers insisted on taking the middle class as a reference-lifestyle, arguing that "[T]here are many things that solicit bourgeois vanity, but also many marvelous things that the many

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143 Rogers, "Domus la casa dell'uomo," 82. "Una casa non è casa se non è calda d'inverno, fresca d'estate, serena in ogni stagione per accogliere in armoniosi spazi la famiglia. Una casa non è casa se non racchiude un angolo per leggere poesie, un'alcova, una vasca da bagno, una cucina."

144 Ibid. "Un uomo non è veramente uomo finché non possiede una simile casa" (82); "Si tratta di formare un gusto, una tecnica e una morale, come termini di una stessa funzione. Si tratta di costruire una società." (84)

145 "The house is a problem of limits (as are other problems of existence). But the definition of limits is a problem of culture and the house reduces precisely to this (as do other problems of existence)." Rogers, "Domus la casa dell'uomo," 82. "La casa è una problema dei limiti (come del resto quasi ogni altro dell'esistenza). Ma la definizione dei limiti è un problema di cultura e proprio ad esso si riconduce la casa (come, infatti, gli altri dell'esistenza)."
can not yet take advantage of." The architect has to distinguish the one from the other; he needs "an instrument . . . for establishing the criterion of choice." But Rogers also implied that the architect's task would be to discover intersubjective values of home. Not only would chez moi, chez toi, and chez soi be a mirror of the person in each case; chez moi=chez toi=chez soi. Through the operation of the "anonymous," the interchangeable "I" that it was the architect's occupation to discover, the capacity to produce a home was equated to the capacity to rebuild a sound social fabric, starting with the individual.

The issues of Domus la casa dell'uomo featured series of articles under headings that would appear in each issue, whose themes included furniture, comfort, and home design. A column called "Problemi," written by Rogers, featured an image and a short extemporaneous text on a current preoccupation, such as the precarious embarking on the use of new technologies, dramatized in one issue by an image of men in a hot air balloon.

Zanuso's articles on prefabrication, in Domus la casa dell'uomo, co-authored with Paolo Chessa, were not the first to appear in Domus on this theme. Peressutti, in 1942, had factored the problem of distribution into his "ideal house" in the form of a mass-produced

146 Rogers, "Domus la casa dell'uomo," 84.
147 Ibid.
aluminum-clad service core.\textsuperscript{149} The theme of prefabrication had also been anticipated in an essay by Rogers on the theme of "A House for Everyone" (1945), where Rogers had pointed to prefabrication as a tool with which poverty could be eliminated by lowering the costs of housing, the low-cost home being a tool for the distribution of a wider set of resources.\textsuperscript{150} In addition, Rogers observed that "Little by little the new customs of society are imposed on building," and predicted the movement of concepts toward greater accessibility, from the upper classes toward the masses; "The bourgeois house was perfected and served as a template for the so-called casa popolare."\textsuperscript{151}

Zanuso and Chessa, in their essay, probed the significance of mass production. In the first essay on prefabrication, whose theme is

\textsuperscript{149} Enrico Peressutti, in \textit{Domus} 176 (1942): 313-317.

\textsuperscript{150} Ernesto Nathan Rogers, "Una casa a ciascuno," in \textit{Esperienza dell'architettura}, 72 (originally published in \textit{Il Politecnico} 4 (Milan) 20 October, 1945). Rogers wrote, "Poverty is an old disgrace of men, but over time one knows truly that this is an evil from which we must liberate ourselves; and so over time one knows truly what a house has to be."(71-72) ("La povertà è una vecchia disgrazia degli uomini, ma da poco tempo si sa davvero che essa è un male da cui dobbiamo liberarci; e così da poco tempo si sa davvero che cosa debba essere una casa.")

\textsuperscript{151} Ernesto Nathan Rogers, "Una casa a ciascuno," 74. "Little by little the new customs of society are imposed on building: behind the ornate facade the rooms of apartments begin to be disposed, in logical harmony with necessity. These are houses of the well-off; the worker populations grow ever more dense in horrendous catacombs; therefore, it was a great thing that from imitation of aristocratic palaces translated cheaply, arose an attempt to build in series. The bourgeois house was perfected and served as a template for the so-called casa popolare." ("Poco a poco il nuovo costume della società s'impose all'edilizia: dietro le facciate ornate incominciarono a disporvi i vani degli appartamenti, in logica armonia con le necessità. Ma si trattava delle case dei benestanti: le popolazioni operaie s'andavano sempre più dense in orrende catapecchie; perciò, fu già gran cosa che dalla sciocca imitazione dei palazzi aristocratici tradotti in moneta spiccola si passasse al tentativo di costruzione più serie. La casa borghese si perfezionò e servì così da schema alla così detta casa popolare.")
the "module," they mentioned the "nucleus," recalling a central metaphor in Zanuso's "casa ideale." The module was the key, the "dimensional reference" that could "connect all the elements of construction in a system adherent to functional necessities and that contemporaneously respects the continuity of surfaces and volumes."\textsuperscript{152} Remarkably, Zanuso and Chessa's model for naturalness—and for the nucleus—was not biology but chemistry. If natural things were made up of cellular units, the authors implied, man-made things, too, were manifestations of nature. Zanuso's "nature" was not a seashell discovered on the shore; it was a pervasive phenomenon guided by laws that could be understood by practices of observation and verified by experiment.\textsuperscript{153}

Zanuso's anticipation of the distribution of domestic amenities by prefabrication, echoing Rogers, would be the subtext of a second house project, "Casa e natura," designed with Giovanni Albricci and published in 1946.\textsuperscript{154} Like the ideal house of 1942, this house, proposed for a location on the Ligurian coast (near Genoa), was characterized in both practical and qualitative terms: it should be

\textsuperscript{152} Marco Zanuso, Paolo Chessa "La casa prefabbricata: il modulo" \textit{Domus la casa dell'uomo} 205 (1946): 26.

\textsuperscript{153} The authors mention Mendeleev and allude to the periodic table. A similar theme can be perceived in an essay on design and phenomenological philosophy, also from \textit{Domus}, in 1944: "Technology in the House," whose theme draws a comparison between man, as an individual in a collective, and a biological cell, as part of an organism, to argue that the act of an individual artist, who endows technology with the humanistic significance of art, can suffuse society. Gaetano Schiaffino, "Tecnologia nella casa" \textit{Domus} 198 (1944), 216-218.

\textsuperscript{154} Marco Zanuso and Gianni Albricci, "Casa e Natura" \textit{Domus la casa dell'uomo} 211 (Jul 1946): 2-5.
easily opened and closed, yet provide the user with a comfortable place of retreat.  

In contrast to the spacious plan of the ideal house, with its concentric zones of privacy, the plan of the 1946 scheme was more sharply defined in terms of function. It was sited on a terraced hillside on the coast, near Genoa, and occupied the full width of one terrace. One long wall of the house would have doubled as a retaining wall for the adjacent terrace while abundant glazing on the other long façade would admit light. [fig. 1.17] As in Zanuso's ideal house, a precise choreography of activities was mapped on to a linear plan. At opposite ends of the terrace were places for work (kitchen and maid's room) and leisure (sitting room), bookends of a spectrum of activity. Between them, the bedroom was a niche with a curtain, meant for use as an extension of the living space during the day.  

A passage in the essay made the point that if the architects had their way, the house would be an urban prototype as well ("A house in nature does not have to be an exception. For now, this represents an advance guard of a future urbanism, when we will have succeeded in bringing the country even into the city."). Moreover, it would be available to anyone ("A

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155 "Someone with few available days must be capable of opening his own house and finding it already ready and furnished with everything needed for an organized and comfortable life, and to be able to chose it without along and complicated inventories, winter configurations, etc." Ibid., 2.

156 Zanuso and Albricci, "Casa e natura," 3. "A curtain encloses this corner, which is comfortable even during the day for an afternoon nap, in a zone of shadow. Normally the two daybeds serve for conversation and reading."

157 "Ibid.,” 2.
house for vacations is today still a luxury of the privileged few; even so, it can be confronted with fairly simple means." \[158\]

La Cucina was published in 1945, as the war ended and Italian architects anticipated a post-fascist society. But already, in the "ideal house" project of 1942, Zanuso had begun to respond to another way of thinking about the home. Pagano's account of the house had employed planning to create an "architectonic image" of the home that could be appreciated as the basis of a productive and economic life for a fascist citizen. By contrast, the new way of thinking about the house, pursued by Ernesto Nathan Rogers after the War, produced a more subjective image of domesticity. Zanuso's way of imagining the house was like that of Rogers, though one sees the psychological reasoning of Rogers's approach, more than its philosophical and political allusiveness, in Zanuso's work. Zanuso's designs are also like Pagano's "architectonic image," in their emphasis on the plan as a representation and means for a way of living. Zanuso, to a greater extent than Rogers, expressed his ideas in architectural drawings, with pragmatic annotations, rather than in writing; and he tended to keep the technical and material characteristics of his projects firmly in view.

\[158\] Zanuso and Albricci, "Casa e natura," 2.
The Vernacular Form as Symbol

The Villa Scotti, the last of Zanuso's 1940s house designs and the only one to be built, displays the most complete reconciliation of two motives that are at work in each these homes: the meticulous functional planning exemplified in La Cucina, and the free disposition of enclosed and open space to meet subjective needs of security and contemplation. In addition, to a greater degree than the "ideal house" and "house in nature," the Villa Scotti possessed a compact, coherent overall form. It was asymmetrical in section, and made of the materials and details of a provincial domestic farm building. By appropriating this form, Zanuso and Albricci inserted their design into a ready-made connection between the house and its surroundings. They placed a modern dwelling in a provincial setting, and at the same time, they assimilated the vernacular to a conception of "modern."

A project that offers an illuminating comparison to the Villa Scotti is the Casa Barbieri e Castana (1945-1946) by Ignazio Gardella. Like the Villa Scotti, it was included in the "house" section of the 1952 survey "L'Italie." A house for a viticulturist, Gardella's house also evokes a pastoral condition. But its modernist orientation is also evident. On the long elevation, it appears to have a flat roof. From the short side, the roof is revealed as neither flat roof nor pitched, but a shallow inverted "V."[fig. 1.18]

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Commenting on the house in a 1959 monograph on Gardella, Giulio Carlo Argan would focus on the juxtaposed characteristics of urban and rural residences.\textsuperscript{160} Its rustic elements included shutters made of tongue-and-groove wooden planks with iron fittings and the roof made of corrugated sheet material on small, closely-spaced wooden joists. Meanwhile, the stucco finish, the large window at the cantilevered balcony, and the composition of windows on upper and lower floors, recalled an urban apartment building.\textsuperscript{161} The house was, and was not, a Rationalist villa, according to Argan. It cohered as a work because the roof shape served as a characteristic detail that united its various impressions, and became a symbol of them in the observer's contemplation of the house, without the form itself being resolved into a single impression.\textsuperscript{162}

Argan would compare the composition of the house for a viticulturalist to that of an earlier project by Gardella, his Tuberculosis Clinic at Alessandria (1938). In discussing the clinic, he stresses the architect's success at playing with materials in an otherwise rather severe composition. The most unusual feature in the

\textsuperscript{160} Giulio Carlo Argan, [Introduction] in Ignazio Gardella, edited by Pier Carlo Santini (Milan: Comunità, 1959), 27-45. The introduction is untitled and includes an English text, from which the quoted passages are taken.

\textsuperscript{161} See the illustrations in Ignazio Gardella, 79-81.

\textsuperscript{162} Argan writes that the inverted roof "establishes a point of view which links together into a chain of images articulated volumes and flat walls, without our ever feeling volume as a plastic mass, or surface as a plate"; he adds that "this is perhaps the first time since the great visual heritage of the Baroque period was rejected and forgotten that the term 'image' reacquires sense in architecture." Argan, "Introduction," 33.
earlier project was a masonry grille, "characteristic of farmhouses," as one of a number of nested rectangular motifs. The grille stood out as a departure from the strict rectangular geometric language of the Bauhaus in this modernist block. But Gardella had not indulged in sentimental pastoral scenography. Instead, he discovered a game of texture, shade, and color, according to Argan.

The characteristics observed by Argan about Gardella's Tuberculosis Clinic (1938), and Casa Barbieri e Castana (1945-1946), identify these buildings as essays in the vernacular, similar in their unsentimental spirit to the exhibition on the vernacular at the VI Triennale, curated by Giuseppe Pagano and Guarniero Daniel. If the same designation can be extended to the Villa Scotti (1946), it follows that Zanuso and Albricci made a "rationalistic" use of the vernacular. Presented in a cold manner, without sentimentality, the mountain chalet is treated as a sign, not a sign of a preexisting value but a sign of something both normal and new.

The vernacular home that belonged among its neighbors was, at the same time, a modern home that provided an efficient and comfortable dwelling, complete with modern fittings and furnishings. In the careful coordination of the kitchen, stair, hearth, and other parts of the Villa Scotti, Zanuso and Albricci focused on specific

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163 Argan, "Introduction," 32.
164 "Gardella plunges into these studies without for a moment letting himself be influenced by the naturalistic suggestions of pictorial tactile sensations, but rather concerning himself exclusively with transposing into the shading of the tone that rigorous sense of proportion which rational architecture sought only in the almost immaterial geometry of lines and planes." Ibid.
lifestyle choices, in keeping with the perspective of experience that had defined Rogers's theoretical consideration of the house. In Zanuso's earlier house projects, the experiences had determined the plans, and the plans had determined the envelopes, resulting in amorphous building forms. By contrast, in the Villa Scotti, the insertion of the interior design in the rustic building form achieved a compact synthesis of parts. No single arresting detail, such as Gardella's inverted roof or masonry grille, stands out in the Villa Scotti. The vernacular form was engaged as a whole, but still provided a means to mediate between the modern interior and the conventional setting; and by extension, between the constraints of a neighborhood and the freedom to change one's lifestyle.

The Villa Scotti was only partly made of rationalized construction (the wooden wall panels were cut to order), and not prefabricated; but it marks an advance in Zanuso's grasp of the entanglement of culture through architecture—of the production of culture, if not its reproduction. If Zanuso had demonstrated his grasp of the creation of an architectonic symbol in connection to a particular cultural message, before the War, the Villa Scotti was a further development of this practice. The project demonstrates that Zanuso could apply the Rationalist priorities of the reasoned solution, the frank display of architectural technique, and the optimized efficient plan, to create an architectural work with a sensibility that was modern in its functional and experiential
aspects, but also responsive to the recovery of privacy and prerogative in Fascism's aftermath.
CHAPTER 2

THE INDUSTRIAL PRODUCT IN ART AND ARCHITECTURE, 1945-1955

Architecture is not dead . . . it is reborn anew with the civilization of mechanical technique, in research into new technology, in a new spatial configuration, in the development of new spiritual needs.

—Marco Zanuso, ARCHITETTURA E PITTURA

Marco Zanuso's Lady Chair was exhibited at the IX Triennale in 1951, along with a divan by the same company, Arflex, in a small room with a few folding chairs, a table and floor lamp. The Lady Chair had originated as an experiment in the use of foam rubber, and the presence of foam rubber in the pink rubber floors and closet doors, as well as the seat cushions of the chair and divan, indicates the breadth of these explorations. The Lady chair was the first furniture piece to be mass-produced in Italy, in 1947; but the testing of applications for new materials involved various architects, by 1950. An example of what these practices produced, at the same Triennale, was the incised floor in "vipla" material, by the architects Luciano Baldessari and M. Grisotti, in an adjacent gallery.

Between 1945 and 1955, Zanuso completed two major architecture projects in which he collaborated with painters. In the same period,

165 The caption of a black-and-white image of the room, published in a survey of the Triennale, describes "a lunch room" with an "integral rubber floor" and "chairs, divan, and sliding partition in foam rubber." Marco Valsecchi, "Giro d'Orizzonte alla T9" Edilizia Moderna 47 (1951): 54. ["Un soggiorno-pranzo (Arch. M. Zanuso); pavimento in gomma unita rossa; poltrone, divano, e pareto scorrevole in gommapiuma."] (English quotations of Italian texts are my translations except as noted. In cases of paraphrase, passages in original language are appended to the citations.)
he published an essay, "Architettura e pittura," in which he characterized his own work with artists and endorsed the broader pursuit of such collaboration. The exhibition he curated in 1955, "Selected Examples of Italian Industrial Design," exhibited in London, shows that ideas about the industrial product in contemporary art, as well as architecture, were acknowledged by Zanuso, and other architects, as they sought a role for the architect as an industrial designer.

Architecture as a "Chassis"

Zanuso was an advocate of collaborations, as demonstrated in several projects and his essay "Architettura e pittura." He endorsed the inclusion of art in buildings, and he viewed the combination of architecture and painting as a way for architecture to bring everyday life into closer contact with art. He argued that the architect and painter, together, could overcome the impasse of stylistic indecision that had plagued art and architecture before both disciplines had turned toward abstraction. The architectural projects he offered as instances of this possibility included the Office and Apartment Building on the Via Senato, and the Apartment Building on the Viale Gorizia.

The office and residential building at 5 Via Senato was built in 1947 and located at Via S. Andrea, close to the center of Milan. It

was a joint project by Zanuso and architect Roberto Menghi; it was the first of Zanuso’s two prominent architecture projects in Milan to be completed around 1950; and it is often cited as the first building, or one of the first, to be completed in Milan after the War. The building was a rectangular volume on a corner site, of concrete construction with stone cladding, with large casement windows and a double-glazed atrium over the entrance. It was amply equipped with utilities and included a passageway to a parking area in the inner courtyard. At first glance, the building appears austere in its architectural details, with its windows arranged in a grid and apparently monochrome palette. At close range, the building has various features to lighten the impression. The cladding is a pink-toned granite; the severity of the window grid is countered with rounded corners in the granite where it is cut around the windows.

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167 In an interview, Zanuso says the building was designed in a sixty-hour charrette. [Marco Stalla, Claudio Venerucci "Marco Zanuso Architetto," (Bachelor’s Thesis, Politecnico di Milano Facolta' di Architettura, 1992-93), 354-63. Fondo Marco Zanuso, Archivio del Moderno, Mendrisio.] Guido Canella wrote that the building was the first built after the War, in his 1963 profile of Zanuso. "There is a building in Milan, in the Via Senato at Via S. Andrea, design in 1947 by Zanuso in collaboration with Roberto Menghi, that marked the start of a certain current in modern Italian architecture. More precisely it had to do with a characteristic way of conceiving architecture and the architectonic product in general, that soon would diffuse and would become the common note of the middle generation of architects (born between 1915 and 1925) in the field of what could be called the 'neorealist' period." Guido Canella, "Zanuso il più problematico degli architetti italiani" Fantasia la rivista della Donna, Nov. 1963, 62-64.

Below each window is a ceramic panel with a pattern of horizontal lines whose variation suggests the use of a handheld rake or comb.

In this project, as in the Sacrario dei Caduti, the collaborating artist was Lucio Fontana. Fontana’s contributions included larger ceramic panels set behind the glass of the atrium over the main entrance, spanning more than one floor in a vertical relief element; and sculpted, colored handles on the main entrance doors.[fig. 2.2] In this building, the architecture serves as an organizing frame in which the art is assigned to specific positions in the building, but the architectural elements are also developed to a degree of aesthetic enrichment.169

The sensuousness of the materials in this building was not lost on contemporary observers. Piero Bottoni, who put the Via Senato in his guide book to modern architecture in Milan (1954), cited "the special care and richness of decorative details and finishes."170 The British architect Allan Ballantyne, who observed the building's utilities, also praised it building as possibly "the building of the

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169 Roberto Menghi, Zanuso’s partner on this project, was also the architect of the "Arlecchino" cinema, a collaboration with the artist Piero Fornasetti. See Interiors (December 1952). Menghi and Fornasetti’s collaboration, like the Via Senato Office building, included sculptures and other integral art pieces, in contrast to the Viale Gorizia building by Zanuso (with Gianni Dova), which featured an application of abstract art across the entire building façade. See Chapter 2. Fornasetti was a frequent collaborator with Gio Ponti, and a similar format of art and architecture can be observed in their work.

greatest aesthetic merit erected in Milan since the war," observing
its finishes and decorations; "the walls are faced in a polished pink
Baveno granite while a continuous glazed panel of 120 square meters
rises above the main entrance to the full height of the building"; he
sees the "lively abstract designs" by Fontana, beneath the windows;
the "exquisite and highly coloured ceramic handles in the form of
conch shells"; and the detail of the basement level that is half
below-ground, lightening the apparent weight of the whole.171

The Apartment Building on Viale Gorizia (1950-1951) was Zanuso's
second building-scale project that involved collaboration with
artists. In this building, which featured a mural by the painter
Gianni Dova, Zanuso articulated a specific and personal stance on
architecture and art.172 He later explained this position in writing in
the essay "Architettura e pittura" ("Architecture and Painting") in
1951. In contrast to previous projects with artists, which included
both literal interventions by a painter and the artistic deployment of
materials by the architects. In the building on the Viale Gorizia, and
in "Architettura e pittura," Zanuso adopted a specific position on the

171 "[The building's] delight lies in the harmonious proportions of its
façade, the richness of its texture and colour, and its careful detailing.
The three-foot continuous aluminium grille round its base gives the
surprising effect that the building is floating clear of the ground."
Ballantyne, "Italian Scrapbook," 83.

172 Gianni Dova (born in Rome in 1925), who had studied at the Accademia
of Brera during World War II, was not long out of art school when he
collaborated with Zanuso on the Viale Gorizia project, whose site was a few
blocks from the Galleria del Naviglio, where Dova's art was exhibited in
1948-1950. [Arturo Schwarz (writing as "Tristan Sauvage"), Pittura italiana
del dopoguerra (Milano: Schwarz, 1957), 400-401.
manner of contribution of the architect and the painter, and the contribution of both to a "synthetic" whole.

As seen from the street, the building was divided in a series of bays, alternating sections toward and away from the sidewalk. Two vertical bays framed a central façade plane that was set back from the sidewalk.[fig. 2.3] Openings to either side allowed one to drive into a rear courtyard. Wrought metal balustrades on the balconies at each floor level make a faint pattern of a repeated inverted "v" which, as the only diagonal in a rigorously orthogonal architecture, provides a visual pivot between the architecture and the painter's intervention. The painter's intervention was a branched abstract pattern of braided diagonal bands in yellow, green, black, and brown on white, executed in a terrazzo-like surface finish across the whole façade.[fig. 2.4]

The quest for a richer aesthetics in Italian modern architecture after the War had been evident to observers of the IX Triennale (1951). In a commentary on the exhibition Marco Valsecchi, a journalist and art critic, suggested that Italian architects and artists had perhaps overcompensated in an effort to put behind them the Reconstruction—and the austere housing blocks it had produced.[fig. 2.5] He praises the experiments for their ambition, if not their success, including what he thought were extreme examples of a general
"recourse to eclecticism." But he defended the exhibition in general; the results of the previous Triennale had shown that "even a generous principle such as that which moved the Triennale of 1947 [namely, the home] could resolve itself . . . in an injustice, and artistically in a regression, in proportion to its fanatical realization."  

Such restlessness would suffice to account for Zanuso's interest in the problem of architecture's relationship to art; the artistic intervention in the architectonic work would tend to enliven a building, however its architecture may have been bound by institutional duties. The placement of art in Zanuso's architecture, between the end of the War and 1951, approximated the way of placing art in housing and institutional buildings that could be seen in various architecture projects during Reconstruction, for instance, in the "QT8" quarter, designed for the VIII Triennale. Moreover, Zanuso

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173 Valsecchi mentioned the grand entrance by architect Luciano Baldessari in collaboration with architect M. Grisotti, a "most laborious attempt to insert artwork into architecture"; "impressionistic painting by Spilimbergo and Dal Bon"; an "expressionist" ceramic partition on the theme of the myth of Orpheus, by Fabbri; suspended cubist caves by Milani, and abstract floors by Attilio Rossi; a luminous carving on the ceiling, and in a more somber key, the psychological resonance of the installation by Max Bill, whose darkened interior invoked an underwater atmosphere and prompted visitors to whisper." Marco Valsecchi, "Giro d'Orizzonte alla T9," Edilizia Moderna 47 (1951): 58.

174 Marco Valsecchi, "Giro d'Orizzonte alla T9," 49.
was part of a group of architects who gave particular attention to the "synthesis of the arts." 175

A brief survey of this tendency, written by architect Carlo Perogalli in 1957, placed Zanuso in this group. 176 Perogalli observed that most architects tended not to take a keen interest in art, or when they did, they tended to unsophisticated judgments about it. 177 By contrast, he (Perogalli) and the other architects concerned with this theme sought to improve their architecture not just by a token "addition" of art but by way of a thorough understanding of the overlap of the disciplines. 178

Architecture and Painting

175 Most likely, the Milanese "synthesis" discourse was linked to the contemporary discourse in France, influenced by Le Corbusier and André Bloc, editor of L'Architecture d'Aujourd'Hui. See Paul Damaz, Art in European Architecture Synthèse des Arts (New York: Reinhold Publishing Corporation, 1956), for a roughly contemporary, international survey of this theme.


177 Perogalli mentions Le Corbusier's church at Ronchamp, and attributes the sensation it created among architects to their stupefaction when confronted with architecture-and-art, in spite of the fact that that building, in Perogalli's opinion, was not one of the master's masterpieces. Ibid., 416-417.

178 Buildings in Milan singled out by Perogalli in relation to this theme, as of 1957, included Ignazio Gardella's Galleria d'arte contemporanea; a building by Ernesto Bianchi and Carlo Paccagnini with a mosaic by the painter Roberto Crippa; the Casa d'Angolo ("corner house") by Luigi Caccia Dominioni; and a trio of buildings on Via Fatebenefratelli, and Via Lanzone, by Giulio Minoletti. Ibid., passim.
In "Architettura e pittura," Zanuso squarely confronted the question of the "synthesis of the arts," asking, "Is it possible to return to the grand composition, to the synthesis of architecture, painting, and sculpture?" He went on to argue that since architecture and art have converged on abstraction, and particularly since architecture had gravitated toward monochrome, the contribution of architect and painter could be productively superimposed.

He contrasted his view with that of the French poet and critic Paul Valéry, who had linked the problem of synthesis with the "death" of architecture, observing with a metaphor, that architecture no longer sets helpful constraints for painting and sculpture; "'Painting and Sculpture are abandoned children. Their mother is dead, their mother Architecture.'" "Architecture is not dead," Zanuso wrote, in the passage that appears as the epigraph to this chapter; on the contrary, "It is reborn anew with the civilization of mechanical technique, in research into new technology, in a new spatial configuration, in the development of new spiritual needs."

Focusing on the collaboration of architect and painter, Zanuso illustrated his theme with photographs of recent architect-painter

179 "Architettura e pittura," 43.

180 "While she lived, she gave them their place, their constraints. They had their space, their well-defined light, their subject, their alliances . . . . While she lived, they knew what they wanted." "Architettura e pittura," 43. The passage is taken from the essay "Le Problème des Musées" (1936). Paul Valéry, "Le Problème des Musées," in Pièces sur l'Art (Paris: Gallimard, 1936), 115-123.

181 Zanuso, "Architettura e pittura," 43. Zanuso's key phrases, in Italian, are "civiltà meccanica," "impostazione spaziale," "nella maturazione di nuovi urgenze spirituali."
collaborations, including the building on the Viale Gorizia; a model he developed with the painter Corrado Cagli, which had been exhibited at the Triennale IX; and two apartment buildings in Rome by Vincenzo Monaco and Amedeo Luccichenti.182 [fig. 2.6] In the latter examples, painting had been applied to panels set in front of a building, on the wall adjacent to a terrace, or distributed across the building at the balconies.

Zanuso wrote in his caption, referring to an apartment building by Monaco and Luccichenti, that "the color underlines the plastic dynamicity of detail"; another building by the same duo is enlivened by a ceramic relief animating the wall adjacent to a roof terrace. In the Viale Gorizia building; "The plasticity of architectonic volumes suggests to the painter a few specific solutions that are no longer limited to the surface, but can liberate themselves in space. The painter finds in architecture a new spatial chassis."183 In another caption, Zanuso described the synergy that could come of the

182 Zanuso, "Architettura e pittura," 47-48. Corrado Cagli (born in Ancona, in 1910), who collaborated with Zanuso on a project that was represented in an aluminum model and exhibited at the IX Triennale, in 1951, had been included in shows at the Galleria del Milione during the 1930s.Schwarz, Pittura italiana del dopoguerra, 376.

183 Ibid., 45.
interaction of architecture with art, and used the term "autonomous" to characterize the independence of the artist in this setting.\textsuperscript{184}

Zanuso maintained that conditions for collaboration between architect and painter were ideal because modern art and architecture had arrived at comparable states of abstraction. Architecture had come to tend toward geometrical and chromatic rigor, along the way to a new level of precision that the present culture demanded:

\textit{The new volumetric and spatial compositions are deliberately tested with an extreme rigor in the use of materials . . . . and this leaning corresponds exactly, in the furthering of method and research, commensurate to a task that modern architects have felt is necessary to the development of a profoundly new and sincerely contemporary art.}\textsuperscript{185}

Zanuso added that architecture had tended to monochrome, in the interest of the same rigor:

\textit{The surfaces that delimit the new volumes and the free spatial compositions are almost always white or monochrome because their capacities of expression and weight ["capacità espressive e di peso"] can be evaluated in their great ["maggior"] evidence. Color is held at a distance as that which could disturb an equilibrium that architecture, as yet in its evolutionary phase, can still not control.}\textsuperscript{186}

\textsuperscript{184} ("Over an architecture defined in a spatial composition of a symmetrical scheme, controlled by a modulation imposed on the division into panels, a pictorial composition comes to be developed, made autonomous by its particularly dynamic, chromatic and dimensional theme.") "Sopra un'architettura definita in una composizione spaziale a schema simmetrico, controllato da una modulazione impostata sul quadrato, viene sviluppata una composizione pittorica autonoma per la sua tesi cromatica e dimensionale, particolarmente dinamica (Arch. M. Zanuso; pittore Dova)." Zanuso, "Architettura e pittura," 44 (caption).

\textsuperscript{185} Ibid., 43.

\textsuperscript{186} Ibid.
To support his point, Zanuso offered a short history of art, culminating in an abstract art that is equally at ease in two or three dimensions.

Painting and sculpture have reached, after long experience, from impressionism to expressionism, from cubism to art concrète, a spiritual and theoretical maturity that could converge to form a truly and effectively contemporaneous medium of expression, adhering to civility [civiltà] in its aesthetic, technical, and productive aspect . . . . From the neoplastic experience of Mondrian to the art concrète of Max Bill or Vantongherloo, from the experiments of the Bauhaus to those of Moholy Nagy, modern painting has manifested such a dynamic capacity of composition in space as to justify an aspiration to dimensions, social as well as physical, infinitely more grand than those of the square panel or orientation of the wall.\footnote{Zanuso, "Architettura e pittura," 43.}

As an enabling condition of the new potential in painting, Zanuso wrote that the leap into three dimensions had allowed painters to address matters of "civility," that is, for the painter to engage the observer in space, and potentially to have an effect on the interaction of people with one another. Along the way, the painter has acquired a new relationship to architecture. "Abstract painting (if it can be denoted by a single term), availing itself of its absolute formal and compositional liberty, can intervene with great possibilities in modern architecture."\footnote{Ibid.} Architecture could provide a three-dimensional field for a painter's intervention. Meanwhile, the intervention of the abstract painter would contribute a new level of expression to architecture. Zanuso goes so far as to anticipate a "science" of this relationship; "The science of a new pluridimensional geometry can be the exact referent of an experience of this type." The
new publicity of art and the collaboration of architect and painter would compel both architect and painter into a more public version of their occupation, emerging from their "habitual confinement."\(^{189}\)

Addressing the habits of the architect, Zanuso cited Le Corbusier, who "already in 1949" had "felt the urgency of the synthesis of the plastic and figurative arts. "'The men of today,'" Le Corbusier writes in the passage cited by Zanuso, "'. . . seem too anxious for someone to come and take them by the hand to place them in front of the wall, at the foot of the wall. And once there? The wall has its laws, its rules, its potential, its vitality,'" Le Corbusier wrote;

A 'wall' (in a manner of speaking) is in reality a fragment of a volumetric ensemble. It is necessary to know the value of volumes, their signification, their power, their capacity to press and oppress, and one does not acquire that except by frequenting built volumes, that is to say the construction sites and ateliers where plans are made and it is necessary to learn to know the technique by which, by means of pure simples, the architectural idea is incarnated, manifested and realized one day. . . . [O]ur men, at the foot of the wall, are, at present, disarmed and their hands weakened by this deprivation . . . . It is not necessary to believe that one goes alone from the easel to the wall and from the stool to the building; it is necessary for men to make useful contacts, animated by an indispensable knowledge and technique.\(^{190}\)

Another source from which Zanuso drew, motivating his theme in "Architettura e Pittura," is Paul Valéry, particularly the theme of

\(^{189}\) Zanuso, "Architettura e pittura," 43.

monochrome in Valéry's volume Pièces sur l'Art. Valéry wrote that the ear could not withstand the performance of ten symphonies at once; just so, one is overwhelmed by so many competing demands on visual attention. The more beautiful and powerful the works, the worse the effect.

Valéry's characterization of the modern human condition is one possible important referent for Zanuso's use of the terms "spiritual" and "emotional" in connection with the task of architecture. Another essay, in praise of printmakers, touches on the value of monochrome. Valéry wrote that while nature is full of an abundance of shapes, colors, and variations, the printmaker, like the writer, has only black and white. Printmaking entails abstraction and composition. The printmaker extracts symbols which are called by the name of line,

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191 Valéry's observation about the unbinding of the figurative arts from architecture (which Zanuso cited, as noted above) follows an account of an unsettling experience at the Louvre. Valéry describes a cacophony of masterpieces: ("They command my undivided attention from every corner; they throw the living point that draws the entire machinery of the body behind it into a panic.") "Elles appellent de toutes parts mon indivisible attention; elles affolent le point vivant qui entraîne toute la machine du corps vers ce qui l'attire . . ." Paul Valéry, "Le Problème des Musées," in Pièces sur l'Art (Paris: Gallimard, 1936), 118-9.

192 "Comme le sens de la vue se trouve violenté par cet abus de l'espace que constitue une collection, ainsi l'intelligence n'est pas moins offensée par une étroite réunion d'œuvres importantes. Plus elles sont belles, plus elles sont des effets exceptionnels de l'ambition humaine, plus doivent-elles être distinctes. Elles sont des objets rares dont les auteurs auraient bien voulu qu'ils fussent uniques. Ce tableau, dit-on quelquefois, TUE tous les autres autour de lui . . ." Ibid., 119.

surface, number, order, form, rhythm, and so on. In short, Zanuso's account of architecture tending toward increasing simplification, and of the humaneness that might be implicit in abstraction, echoes Valéry's observations. The implication is that, in the chaos of sensory stimulation, the assimilation of art to architecture has the possibility to bring art into a position where it is, on one hand, coordinated over a large scale, in contrast to the clamor that struck Valéry in the museum; and on the other hand, perceived less directly when integrated into of the physical surroundings.

Zanuso's insistence on what he calls the "autonomous" contributions of architect and painter, in "Architettura e pittura," is consistent with an argument elaborated by Ernesto Nathan Rogers a few years previously. Rogers had argued that, because of their responsibility to practical needs determined by rational laws and the demands of "human relationship," the forms of architecture could not be resolved according to the principles of an "autonomous sculpture." By the same token, ornamentation could only be completely free if liberated from architecture. The tension between these "two terms of the architectonic phenomenon" is summed up in an

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194 "Opérant ainsi sur les êtres et sur les objets, sur les événements et sur les motifs que le monde et la nature lui offrent, il en abstrait enfin ces symboles de son action dans lesquels son pouvoir de compréhension et son pouvoir constructeur se combinent, et qui se nomment: la Ligne, la Surface, le Nombre, l'Ordre, la Forme, le Rythme, et le reste . . ." Paul Valéry, "Petit Discours aux Peintres Gravures," 139.

extremely "precarious dialectic synthesis," because the sculptural element "struggles violently to manifest itself," Rogers wrote.

The more architecture is conscious of the exact function that its elements have to interpret, the more it is conscious, that is, of the exact relationship between utility and beauty that has to exist in each of those elements; the more it will be liberated from the ornaments that threaten to pervert its nature.196

For Zanuso's reading of Paul Valéry on the theme of the "spirit" that can manifest itself in monochrome geometric forms, a suggestive antecedent is the involvement of Milanese architects with Italian poets of the "hermeticist" school, during the 1930s, which had ties to Valéry and focused on making experience immediate through words.197 A document of this connection is the journal *Vita Giovanile* (later renamed "Corrente" and associated with the art movement of that name). Founded in 1938 by Ernesto Treccani, a 17-year-old at the Milan Polytechnic, *Vita Giovanile* printed the work of contemporary poets, philosophers, art critics, and others, including Salvatore Quasimodo, Eugenio Montale, and Giuseppe Ungaretti of the "Hermeticism" movement; Umberto Saba, Leonardo Sinigaglia, Sergio Solmi; plus the philosopher Antonio Banfi; art historian Carlo Ludovico Ragghianti; writer Elio Vittorini; and Gillo Dorfles, among others.198

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196 "...[Q]uanto più l'architettura è cosciente della funzione esatta che con i suoi elementi deve interpretare; quanto più è cosciente, cioè, della relazione esatta fra utilità e bellezza che deve esistere in ciascuno di quegli elementi: tanto più essa si va liberando degli ornamenti che minacciavano di snaturarla." Rogers, "Situazione dell'arte concreta," 149.

197 Italian Hermeticist poets included Giuseppe Ungaretti, Eugenio Montale, and Salvatore Quasimodo.

Zanuso's interest in monochrome, and his response to the theme of the humanity of abstraction and simplification, are also compatible with Ernesto Nathan Rogers's ideas about art, as formulated between the late 1930s and late 1940s. An early iteration of Rogers's postwar project on architecture can be found in an article on the "primitive" in architecture, in the journal *Valori Primordiali*. Contributors of essays to the first issue included Massimo Bontempelli, Antonio Banfi, the painter Carrà, and Raffaele de Grada. The journal ran images of paintings and sculpture, by Lucio Fontana, Mario Radice, Osvaldo Licini, Birolli, and other artists, most of whom had been associated with the astrattisti movement, exhibited in Milan galleries during the 1930s. Architecture also appeared in *Valori Primordiali*, with buildings by Sartoris, Terragni, Figini and Pollini, Cesare Cattaneo, and Pietro Lingeri (many of whom, like the artists Radice and Rho, were from Como) illustrated in photographs and plans, complete with dimensions.

In his essay, Rogers describes the project of the "primordial," referring to the

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199 Ernesto Nathan Rogers "Per una Valutazione Primordiale dell'attuale Architettura" *Valori Primordiali* 1 (1938): 148-149. *Valori Primordiali* was in print at the same time as *Corrente* and drew some of the same contributors. It was based in Milan, but drew many participants from the Como-based rationalist circle of Giuseppe Terragni. Publication ceased in 1940. The editor, Franco Ciliberti, was a theosophist philosopher from Como who operated the Galleria Ciliberti in Milan, founded in 1934; his wife, Ponina, was a designer and pianist and co-directed the gallery.[Emma Gravagnuolo, "I saluti di Marinetti all’amica comasca," *La Provincia il quotidiano di Como* online, March 21, 2009. http://www.laproviciadicomo.it/stories/Cultura%20e%20Spettacoli/99132/ (Accessed May 25, 2010).]

200 *Valori Primordiali* 1 (Feb 1938).
... anxious research that animates us moderns, intended to attain the primordial values of our time... an eternal anxiety of the spirit that is renewed many times in the course of millennia and has produced the highest and most blazing revolutions in the field of thought, of art, of politics itself.  

More than one idea in this essay would resurface in Rogers's postwar writings about architecture. He argued that architecture would be renewed through emulation of the masters, a theme that would recur in the historical essays he wrote or sponsored at *Domus la casa dell'uomo* and *Casabella-Continuita*. Rogers also wrote that the "primordial" was sometimes apparent in the work of unknown architects, which presages his cycle of essays on "anonymous"; and he referred to the architect as an "artist," and later gave his attention to the art concrèt in *Domus la casa dell'uomo*. The implication of the "anonymous" character of the primordial is that the primitive can be discovered anywhere:

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202 To explain the primitive in architecture, Rogers specified two forms in which the primitive could present itself: in the work of masters, along the familiar lines of their work; or unexpectedly, in the work of others. "[H]ere the two-faced personality of the primordial revolutionary is created which is, at one and the same time, revisor of the past and prophet of the distant future." Ernesto Nathan Rogers, "Per una Valutazione Primordiale dell'attuale Architettura," 148. As "primordiali," he names Adolf Loos, Antonio Sant'Elia, Walter Gropius, Ludwig Mies van der Rohe, Le Corbusier, Richard Neutra, J.J.P. Oud, Wassily Luckhardt, Marcel Breuer, Giuseppe Terragni, Alvar Aalto and André Lurçat (specifying Lurçat before he went to Russia).
History proceeds . . . more slowly and along this line we find other figures of artist which count, at times, less as personalities but as much or more for the absolute aesthetic value that is in their work, which reaches an equilibrium that is not present in the work of the prophets; these establish a climate, a style, a quality of the classic, that is, a natural and almost unconscious development of the idea.\textsuperscript{203}

It followed, for Rogers, that a task for critical reflection was the discernment of these chance appearances, the "valid recognition in history of the tendencies of functional architecture," wherever they arise.\textsuperscript{204}

\textsuperscript{203} Rogers, "Per una Valutazione Primordiale dell'attuale Architettura," 148.

\textsuperscript{204} Ibid.
In his characterization of the collaboration of architect and painter, Marco Zanuso predicted that an "intentional modern mural art" would once and for all end the "crisis" of the artist's "isolation and social inefficiency." He added that in order to do so, this form of painting would have to have "assimilated, as architecture itself has, all the existing resources, artisanal and industrial." Part of what is entailed by Zanuso's term "industrial" is a relationship of the artist to the industrial product. In fact, the development of industrial products was a means and medium of this collaboration; Gianni Dova's intervention on the Viale Gorizia was made possible by a terrazzo-like material, manufactured by the company "Fulget," of Bergamo.

In addition to his use of rubber materials in the suite at the IX Triennale, cited above, Zanuso had explored the treatment of surfaces in the interior design of an office suite. This was not a collaboration with an artist; Zanuso himself was responsible for the surfaces along with other aspects of the design. The project was characterized in terms of three main points: a plastic sheet product, "Santoflex," which was applied in selected colors to the stair treads.

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205 Zanuso, "Architettura e pittura," 43.
206 Ibid.
207 "Materie plastiche nell'arredamento di un ufficio," Domus 273 (Sept 1952): 25. An author is not named, but the bullet-list format is conspicuously similar to the laconic prose style of many of Zanuso’s articles.
and the desk; the conception and application of a "desk-and-shelving complex" at various points, and a partition wall system with double glazing and venetian blinds that allowed variable degrees of isolation between offices. In its details, the office furniture was carefully designed for specific administrative routines. The desk was, in the author's words, "a single furniture piece, complete and transportable, that incorporates all the fittings of an office into a single element." The writer compared the architect's use of colored surface material to introduce color, without indulging in decorative effects, to the development of functionally efficient furniture and the control of light and transparency—all aspects of the "logical" interior.

A second project that would embody Zanuso's conception of synthesis was the Linoleum showroom and reading room for the Società

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208 "Materie plastiche nell'arredamento di un ufficio," 25. The desk was designed according to the actions of retrieving files and using the typewriter and telephone. "The disposition of parts in this furniture piece is studied in such a way that the seated worker has objects close at hand when needed (files, telephone, typewriter, letter paper, bells, archive, etc.) without the need to stand up." (25) The organization was assisted by a glass desktop hovering over the wooden surface, affording the arrangement of documents on two levels. Similarly, the partition wall was a reinterpretation of the conventional wall with the assistance of glass, allowing the appearance of a continuous space but uncoupling the visual and auditory functions of a solid wall, to be recalled according to need. [F]rom transparency to semi-transparency, to closure, these regulatable partitions [regolabili] establish a gradient of isolation and communication among the different locations, which is the substantial element in the architecture and functionality of interiors." Ibid.

209 The reviewer observed, "The interest of this interior lies in the fact that this was not an abstract and arbitrary formal variation on the theme of the office, but a logical setting of the theme according to exclusively modern necessities and methods." Ibid.
Unlike the Santoflex office, this was a collaboration with artists, namely the painters Gianni Dova (once again) and Mario Ballocco. In fact, Zanuso's conception of the collaboration of architect and painter was very close to that of Ballocco. Ballocco was a painter associated with the Milanese "arte concreta" (the Italian branch of the international movement most commonly known by its French name, "art concrèt") and he too, like Zanuso, had come to focus on architecture as a destination of art. The Linoleum shop demonstrates the congruency of Zanuso's ideas with those of this segment of the arte concreta, and links his conception of the synthesis of the arts to that art movement and their sources, particularly the Bauhaus artists Theo Van Doesburg and László Moholy-Nagy.

Like the Viale Gorizia, the Linoleum showroom involved the architect and painter in the design of a common object. The interior was a rectangular volume with street-facing vitrines along two sides.

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210 The Società was a subsidiary of Pirelli, a manufacturer of linoleum and a distributor of other products, including rubber flooring. The address in the Società del Linoleum advertisements locates the firm on the Via Macedonio Melloni while Zanuso's drawings indicate a more central location on the Via Dante (both in Milan). The Via Dante location is cited in Milano Oggi (Milan: Edizioni Milano Moderna, 1958).

211 Ballocco (born in Milan, in 1913) was educated at the Accademia di Brera between 1934-1939, concurrently to Zanuso's enrollment at the Milan Polytechnic. His early work was neo-cubist and expressionist, until he changed direction after a sojourn in Buenos Aires in 1947. Paolo Bolpagni, ed., "Mario Ballocco Pittore e Cromatologo" in Mario Ballocco (Cinisello Balsamo: Silvana Editoriale, 2009), 10-26. On his return to Milan in 1948, Ballocco aligned himself to the contemporary art concret, rejecting representation in painting. He would exhibit with "Gruppo Origine," which began with a mysterious show that was kept secret from the press, in a ground-level apartment in Rome. The group's manifesto was printed in the journal A-Z arte d'oggi in November, 1949. Other members of Gruppo Origine included Ballocco, Giuseppe Capogrossi, Ettore Colla, and Alberto Burri. Ibid., 11.
Beyond the vestibule, a square atrium led to a small conference room and the reading room. Above the reading room was a mezzanine, with additional seating and bookshelves reached by a curved stair made of two layers of bent sheet steel. A photograph shows a compact space furnished with seating and tables, including the divan by Arflex, designed by Zanuso and exhibited at the IX Triennale. The floors and walls were finished with smooth, colored sheet material and exhibited the bars and arcs of the painters’ graphic interventions. A view of the reading room floor, by Gianni Dova, shows how the arcs and wedges of color work in the space, relating to each other and appearing to respond, in their dimension and shape, to the mezzanine stair.

The accounts of critics who visited the space and wrote about it are an aid to forming a more complete picture, and are meanwhile evidence of how the project was perceived. One reviewer was the painter/critic Gillo Dorfles, a key figure in the Milanese arte concreta movement. Dorfles identified the shop as a further iteration of the proposition on the Viale Gorizia, mentioning the

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212 Painter and critic Gillo Dorfles (born in Trieste, in 1919) began to paint in 1936, adopting a non-representational style. In 1948, he founded the Italian art concreta movement, Movimento Arte Concreta, along with Bruno Munari, Atanasio Soldati (a key figure in astrattismo, from 1933), and Gianni Monnet. Dorfles was a contributor of critical essays on art and architecture to Milanese journals of the 1930s, including Italia Letteraria and Vita Giovanile. When he reviewed the Linoleum Showroom in 1952, he had recently written a book on the Baroque in Modern Architecture (Barocco nell’architettura moderna (Milan: Libreria Editrice Politecnico Tamburini, 1951)). Among his subsequent books are a history of modern architecture (Architettura Moderna (Milan: Garzanti, 1956)) and several books on aesthetics, including an anthology of essays on bad taste (Kitsch the World of Bad Taste (New York: Universe Books, 1969).]
distinctness of the architect's and painters' work as a characteristic.  

Addressing the rapport between the architect and painters, he acknowledged that the architect's design of the envelope had determined the framework in which the others would work; but he saw no indication that the artists should be constrained by this condition. He described a choreography of the visitor by way of the painter's intervention, which he called "functional painting."

See how, in the partition to the right of the entrance, a particular material (rubber) has been used to create two panels framing a door and interwoven with many ably distributed geometric segments. This is, in our opinion, an example typical of that which could be called 'functional painting' (Gebrauchsmalerei, if we want to apply to painting a term usually used for certain music), or the use of a true and proper abstract pictorial composition with a precise utilitarian end; that—in in this case—of presenting the possibility of employing new materials (linoleum, rubber) in all the vast colored gamut such materials have at their disposal.

Dorfles observes Dova's use of color in more or less dynamic ways according to the use of the entrance and reading room.

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213 "The architect Zanuso (who has already had the impulse to try out, in 'exterior' architecture, the application of pictorial and sculptural elements) has realized here an interesting example of modern and dynamic interior, in which architecture, painting and sculpture penetrate each other despite remaining distinct." Gillo Dorfles, "Una nuova biblioteca per architetti," Edilizia Moderna 48 (Jun 1952): 53.

214 "Naturally the art that has prevailed over the others is always architecture, which is entrusted with the most delicate and technically necessary tasks. In effect the study with the plan and section of places were conceived, the alternative of linear and rectilinear structures with curved and sculptural elements, the attention given to illumination, deserve to be fully factored in and valued." Ibid. "The artist collaborators, Dova and Ballocco, have drawn on completely personal themes and were able to liberally construct their artistic inventions, adapting them to the atmosphere and the 'style' of the place in collaboration with the architect." Ibid.

215 Ibid.
The painter Dova has known how to reveal in his experiments a precise and singular personality: the 'chromatization' of the entrance (so as not to diminish the importance of the work by using the word 'decoration') has been considered; the lozenges of colored rubber of the floor form a vivacious and lucid motif, but the planning of the reading room floor is much more understated so as not to distract the reader. In both floors, the use of color has been fitted to a precise purpose: to announce and invite in the first case, to mute distractions in the second.216

A second visitor who assessed the interaction of contributors to the Linoleum showroom was Olga Gueft, writing for the American magazine Interiors.217 Regarding the interaction of architect and painters, Gueft inferred that the artists responded to functional aims prescribed by the architect. The painters' marks "move dynamically over the surfaces of the interior," and "focus attention where the architect wants it."218 This observation, like Dorfles's note of "functional painting," indicated the cooperation of architect and artist in plotting one's movement through the space.

Functional Painting

The Linoleum showroom was a small-scale interior project, in contrast to the urban scale of the Viale Gorizia. An important aspect is its demonstration that contemporary painters had come to seek responsibility for the functional programming of space. By its more intimate involvement with the interaction of people with the space and

216 Dorfles, "Una nuova biblioteca per architetti," 53.


218 Ibid.
with each other, through its role in delineating the threshold and product display, the painterly component of the showroom instantiates what Zanuso called the "civility" of painting in three dimensions. The project illuminates the painters' own ideas, which are hinted at by Dorfles's characterization of the painter's role as "functional chromatization." In fact, following his work in the Linoleum showroom, Mario Ballocco would seek further work on projects of this kind, as a color consultant.

A fuller account of the notion of functional painting is given in Mario Ballocco's essay "Arte Funzionale," which had appeared in the journal *A-Z arte oggi*, in 1950. Ballocco (who was editor of the journal and wrote an editorial that appeared on the front page of nearly every issue) had characterized buildings, furniture, and every kind of object as bearers of color and light on their surfaces, which he saw as a precondition and proof of the expanded terrain of art. Ballocco used words like "spiritual," and "disintegration," to characterize this condition. Looking at the history of art since the nineteenth century, he wrote that through the heightened realism exemplified by photography and other mechanical and technical means,

219 Dorfles, in his account of the Linoleum showroom, placed the word "decoration" in quotation marks, i.e. "the 'chromatization' of the entrance (so as not to diminish the importance of the work by using the word 'decoration') has been considered." The painter is supposed to have set aside the trivial conception of his work; his role is dubbed "functional chromatization." Dorfles, "Una nuova biblioteca per architetti," 53.

220 Hired by a mineral water factory in the mid-1950s, Ballocco would propose a colored wall to alleviate the afterimage experienced by assembly line workers. Paolo Bolpagni, "Mario Ballocco Pittore e Cromatologo," 17.

art had "shed its extra-artistic mantle" and "become spiritual to express the absolute in a new creative order."222 In the same essay, he described the arte concreta as "a phenomenon of disintegration," a "new world of forms and colors" that was "destined to explode from the work of art and recompose itself in that infinite series of objects that enter into practical use."223

Zanuso would use analogous language in "Architettura e pittura." Architecture was "... reborn anew with the civilization of mechanical technique, in research into new technology, in a new spatial configuration, in the development of new spiritual needs." Modern painting "... has manifested such a dynamic capacity of composition in space." Zanuso would refer to the "absolute formal and compositional liberty" of painting and describe architecture as a substitute for the canvas, as observed above.224

For both Zanuso and Ballocco, art, not architecture, was the fundamental partner in the synthesis. They described the physical surroundings as a field of phenomena—of color, light, and geometry. Zanuso, with his language of "autonomy," alludes to a parity of artist

222 Ballocco added, "We are at arte concreta. The invention of new forms, that is, and of new combinations of colors in a primordial expression of the life of the spirit, is exalted as a religious fact or an episode of history was once exalted." Ballocco, "Arte Funzionale," 1.

223 Ibid. Ballocco's notion of an imminent new frame of experience in art may well have been inspired by the "Manifesto Blanco," which was written in Buenos Aires in 1946, just before Ballocco's visit in 1947. A key difference is in Ballocco's focus on the application of arte concreta to practical purposes. See B. Arias, H. Cazeneuve, and M. Fridman, "The Manifesto Blanco" (1946), reprinted in Lucio Fontana, Catalog of Exhibition at Palazzo delle Esposizioni, Rome (Milan: Electa, 1998), 115–117.

224 Zanuso, "Architettura e pittura," 43.
and architect, but Ballocco had made the priority of the artist explicit, arguing for the suitability of arte concreta painters to instruct the applied arts and adding that, just as art could be projected onto smaller objects in interior space, it could occupy buildings.\(^{225}\)

A corollary of this notion of art was that art could find its way into every kind of object by inhabiting the industrial product. While industrialization entailed new methods of production of every kind of object, new surface materials, and familiar materials in an ever-expanding gamut of colors, offered the artist a means to insinuate his intervention into every part of their everyday surroundings. An artist in the arte concreta who focused on this argument was Bruno Munari. Along with Ballocco, Munari would assert a series of ideas, in essays

\(^{225}\) "Buildings," Ballocco wrote, "in a freer vision—for now seen only in rare cases—will finally be able to extricate themselves from their heavy linear and coloristic monotony whose lack of imagination and creative impotence are justified by reference to rationality. Similarly, around the house, the small canvas formed with its spiritual content transforms itself into ample mural decorations that are inserted as singular bodies into architectonic forms. All those objects of furniture until now linked, in a presumed and too often awkward modernity made in one stroke, to the most trite communal places, have come to be substantially renewed, conserving only practical needs." Ballocco, "Arte Funzionale," 1.
for A-Z arte d'oggi, about how an engagement with industrial products could expand the domain of art.\footnote{Bruno Munari had first emerged in Milan at age 20, in a 1927 show with the painter Aligi Sassù. Inspired by Futurism, Munari and Sassù expressed the desire "to be able to create a mechanical, animal, and vegetable world, completely new and original." Arturo Schwarz, Pittura italiana del dopoguerra (Milano: Schwarz, 1957). In 1930, Munari (again with Sassù) was among the patiners whose experiments led to the early delineation of astrattismo, at the Galleria del Milione. During the 1940s, Munari contributed theoretical articles to Domus; his work was featured in Domus la casa dell'uomo. Between 1926-1929, Munari had worked in the studio of his uncle, an engineer; his later work would feature (deliberately fantastic, absurd, or humorous) mechanical structures. Several essays by Munari on art, design, and style, appeared in Domus during the 1940s. His work in the mid-1950s was featured in Stile industria (see below). He would also be internationally known as an author of children's books.}

In "Art and Industry" (1950), Munari cited "the fact that the public lives in one world and the artist in the other," and invited the artist to seek a role for himself in everyday design.\footnote{Bruno Munari, "Arte e industria" A-Z arte oggi 2:4 (Apr-May 1950): 3. Subtitle: "l'arte concreta ha la possibilità di portare un contributo vantaggioso per l'industria e per la società" ("Art concrete has the possibility of an advantageous contribution to industry and society").}

Accordingly, Munari wrote of "recovered contacts between architects and producers, who would be newly relevant to one another." He added, "an object can and should be beautiful with its own forms, as an insect or a flower is . . . . And whoever can [give the object such a form], if not an artist who can arrive at the origins of forms and at the pure agreement of colors?"\footnote{Ibid.}

Like Ballocco, Munari emphasized the inherent possibility of transfer of art to various kinds of object, fulfilling the artist's aspiration to an increasingly public role by turning mundane objects into works of art. In these terms, the artists in the arte concreta
movement regard the industrial product, and especially the surface finish material, as their mode of participation in the new synthesis of the arts.

As noted above, contemporary critics regarded the Linoleum showroom, with its coordination of functional plan and functional painting, as an example that illuminated what was at stake in the collaboration of architect and artist, relative to the goals of art concret: the space could be read as a demonstration that abstract forms were neutral enough for insinuation into any surface, and for minute adaptation to everyday activities. The interception of industrial products by art, in the Linoleum showroom, was also a theme in Dorfles's and Gueft's reviews. Gueft was struck by Zanuso's use of materials in a way that made shelving superfluous, a feat assisted by the coincidence of the artists' materials being the showroom's subject matter, linoleum and rubber flooring. Dorfles observed that Zanuso, who had designed the furniture pieces used in the space, had appropriated sheet metal and foam rubber as a point of departure for the objects' shapes and characters. "Without the use of a particular sculptural material," Dorfles writes, the chairs and divan "would not have had that structural characteristic"; the careful handling of sheet metal in the stair had produced a "rigid static tension of . . . evocative effect."229 The space featured Zanuso's Triennale IX divan, which had been made by Arflex and exhibited in at the 1951 Triennale, along with his Lady chair by the same company.

The confinement of the art to a mural, on the Viale Gorizia, suggested timidity to Carlo Perogalli, whose tastes ran to a more thorough interpenetration of architecture and art. But the placement of art in Zanuso's building reflected the particular stance in which he maintained that architecture should host the artwork as well as present a coherent architectonic image. The implied balancing act—admitting an external intervention in the architectonic work, but controlling it—is even more apparent in the Linoleum showroom. The artists' interventions animated the space occupying what might otherwise have been neutral floors and walls. At the same time, they played a role in orienting the visitor. A white stripe create a path in the floor of the main room, while colored strips on the wall draw on perspectival distortion to convey a sense of movement.[fig. 2.12] These invited the movement of the eye, and by extension the body, as Dorfles observed. In the reading room, the curved shapes on the floor intersect with the curved desk and stair. The round desk is adapted for ease of movement around it; the arc can also be considered the radius of an attendant's arm. The floor graphics echo the radius of the desk and the width of the stair. The shapes on the wall also enter into a composition with the stair and floor, creating a three-dimensional assemblage.

As movement and use are connected to shape and décor, the artists's interventions informed the project in four dimensions. The architect remains in some sense "in control," as Gueft remarked, emphasizing the architect as the author of the space. The painters'
interventions "focus attention where the architect wants it," she wrote. This could be taken to suggest that the artist's choreographic cues agreed with the architect's functional plan. Just as the addition of light was assimilated to an overall architectonic whole, so was the addition of art. By the placement of light, the architect illuminates the space, and by the placement of art, he "charges" it with moments of explicit aesthetic experience.

A Synthesis Based on Art

According to Zanuso's concept of the synthesis of the arts, architecture could support the intervention of artists, and could serve as a support for such interventions at every scale. The architect was not a leader or manager of the supported artists; the contributions of all were supposed to be autonomous. For Mario Ballocco, a building, like any other object, was a site for the artist's intervention. He wrote that the art concret painter could "instruct" the applied arts, and even occupy the building. In tune with this idea, Zanuso's conception of architecture allowed it to adapt to this supporting role.

Mario Ballocco's journal, A-Z arte oggi, was the principal chronicle of the arte concreta, with close ties to the international art concret movement as well. By extension, this identification reflects a tie between the arte concreta and avant-garde figures who

were prominent between the two World Wars, including the painter Theo van Doesburg, who had coined the name of the art concret, and more proximally Max Bill, the Swiss artist-designer and Bauhaus graduate who was among the art concret's principal protagonists.231 The arte concreta in Milan had developed after the war, with the postwar exhibition in Italy held in 1945, followed by a larger show at the Palazzo Reale in Milan in January and February, 1947. The latter show included work by artists from elsewhere in Europe, as well, including Wassily Kandinsky, Paul Klee, and Max Bill, along with many Italian painters.232 The official founding of the Movimento arte concreta occurred in 1948. The manifesto, which developed over several iterations and various topics, starting in 1951, was written by Gillo Dorfles.

231 The artists' interest in the "concrete" reflected a distinction between "concrete" and "abstract," emphasizing that a non-representational painting referred to nothing beyond itself. They derived their definition of "art concret" from the work of the painter Theo Van Doesburg, according to Arturo Schwarz: "'Concrete, not abstract painting, because nothing is more concrete, more real, than a line, than a color, than a surface . . . . A woman, a tree, a cow, are concrete in their natural state, but in the state of painting they are more abstract, more vague, more speculative than a plane or a line.'" Arturo Schwarz, Pittura italiana nel dopoguerra, 92. Schwarz cites Michel Seuphor, L'art abstrait (Paris: Maeght, 1950), 13, for the quotation of Van Doesburg.

232 Artists included in the second show were Jean Arp, Max Bill, Walter Bodmer, Camille Graeser, Jean Herbin, Hans Hinterreiter, Max Huber, Wassily Kandinsky, Paul Klee, Leo Leuppi, Rochard Lohse, Sophie Taueber Arp, George Vantongerloo, Friedel Vordemberge-Gildewart (later a professor at the Hochschule für Gestaltung at Ulm, Germany), along with Italians Gillo Dorfles, Osvaldo Licini, Bruno Munari, Manlio Rho, Luigi Veronesi, Franco Bassi, Franco Bombelli, Ezio Bonini, Ada Bursi, Galliano Mazzon, and Ettore Sottsass Jr. The December 1948 show, held at the Libreria Salto in Milan, included lithographs by Gillo Dorfles, Lucio Fontana, Garau, Galliano Mazzon, Gianni Monnet, Bruno Munari, Atanasio Soldati, Ettore Sottsass and Luigi Veronesi, and the Roman painters Piero Dorazio, Guerrini, and Perilli. Ibid., 95. This show was followed by solo shows by various members during 1949, beginning with abstract photography by Luigi Veronesi (b. 1908, the brother of Giulia Veronesi, art historian and a secretary of Casabella under Pagano and Persico).
Dorfles. Its main claim was that art is organic, changeable, elastic, and "concrete." 233

Some basic concepts associated with abstraction in art, which had appeared in the writings of Zanuso, Ballocco, and Munari, had evidently been drawn from the theoretical writings of Theo van Doesburg and Laszlo Moholy-Nagy, specifically from volumes of the Bauhausbücher authored by each of these, in 1925 and 1927, respectively. 234

The "synthesis of the arts" was addressed by Van Doesburg, in his Principles of Neoplastic Art, under the heading of "unity." Architecture is "building," defined as the resolution of multiple elements into a whole. One theme is the rejection of subjectivity in the means or terms of artistic creation, which he calls "Gestaltung." 235 "Building, which means organizing one's means into a unity (Gestaltung), is all-important to us . . . . This unity can be achieved only by suppressing arbitrary subjective elements in the

233 See "Arte Organica" in Schwarz, Pittura italiana del dopoguerra, 238.

234 Theo Van Doesburg, Principles of Neoplastic Art (1925) with Introduction by Hans M. Wingler, Translated from the German by Janet Seligman (New York: New York Graphic Society, 1966). Van Doesburg's text was originally published as Bauhausbücher 7 (1925). The Bauhausbücher were a series of fourteen volumes, initiated and edited by Walter Gropius and Laszlo Moholy-Nagy, who headed the Bauhaus at that time—and edited by those two. Each volume featured a different artist. Moholy-Nagy's Painting, Photography, Film, also cited here in the form of a translation from the German by Janet Seligman (Cambridge, Mass.: MIT Press, 1967), was volume 8 (1927).

235 "We reject all subjective choice of forms and are preparing to use objective, universal, formative means." Van Doesburg, Principles of Neoplastic Art, 4.
A related theme was the metaphysical relationship of the arts; each is a different mode of access to a common content. Van Doesburg explained that aesthetic experience is the content of art; the different means by which it is approached in painting or music, for example, define the domain of the painter or composer.237

Thus, Zanuso's "autonomy" would affirm what Van Doesburg had maintained: the painter and other artists were defined by their means, and each must aim at achievement in his own discipline. Moholy-Nagy had referred to the same idea in his text, adding that the "next step" is an "architectonic composition"; "a synthesis out of the functional elements proper to architecture—therefore including material-color—that is, out of the combination based on function of coordinated forces."238 He added that the range of building materials, in itself, is an adequate palette for aesthetic development along these lines.

Van Doesburg had also stressed the critical contribution of the aesthetics of the surroundings to human well-being. He described a simple psychology of perception in which the artist determined an aesthetic experience in his art; because he had done this, other

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236 Van Doesburg, Principles of Neoplastic Art, 5.
237 Ibid., 14.
238 Moholy-Nagy, Painting, Photography, Film, 18.
observers would find the same in it. Art entered into the life of the observer; "Perception and vital experience mutually determine one another." For this reason, Van Doesburg had asserted the artist's responsibility to the public. Aesthetic experience was active, not passive.

In an echo of these ideas, Munari would write in A-Z that "the true social function of art must be that of improving not only the human spirit but also the surroundings in which man lives." Munari also observed that "the public lives in one world and the artist in the other." In the context of other parallels, this preoccupation of Munari's recalls Van Doesburg's remarks on the theme of the artist who

239 "Art is . . . the expression which corresponds to our purely aesthetic experience of reality . . . . We may conclude from this that when the content of the artist's active experiences is aesthetic, the expression of these experiences must have a similar content." Van Doesburg, Principles of Neoplastic Art, 14.

240 Ibid., 12.

241 "The essence and occasion of all art lies in this formative reaction of our active experience of reality . . . . The work of art is the expressional or formative aspect of this intellectual, active experience of reality." Van Doesburg, Principles of Neoplastic Art, 13. Moreover, "The artist's experiences synthesize . . .," or, "[I]n the formative vision everything is equalized, i.e., enters into relationships, because by their nature the artist's experiences synthesize . . . things which are objectively separate become aesthetically unified." Ibid., 18.

lives in his interior and exterior "worlds," apart from those of the public.243

On the integrity of the collaborative work, Moholy-Nagy had emphasized that unity should arise in it through the contribution of each "person" to the extent of his abilities. Like Van Doesburg, Moholy-Nagy had maintained that art was a reflection of human needs, citing "optical experience" as art's preoccupation and a human physiological requirement.244 Van Doesburg had written that the surroundings was an extension of the living being; "Everything that surrounds us is an expression of life. Every living thing experiences its environment consciously or unconsciously."245

Moholy-Nagy's principal aim in Painting, Photography, Film, had been to describe, and to advocate, the painter's progression to other media; the painter "needs no special courage to embrace the art of creative presentation as provided today by photography and the film."246 By the early 1950s, he had published two more influential books: The New Vision (1936) and Vision in Motion (1947). One could argue that the influence of Moholy-Nagy in the realm of print could be

243 "The artist speaks from within his interior and the exterior worlds in words and images which come easily to him because they are elements of the world in which he alone belongs. The public's worlds, however, are totally different and the words with which it expresses its ideas are entirely characteristic of its own world." Van Doesburg, Principles of Neoplastic Art, 6; or here, "The modern artist desires no intermediary. He wishes to address himself to the public directly, through his work. If the public does not understand him it is up to him to provide his own explanations." Ibid., 9.

244 Moholy-Nagy, Painting, Photography, Film, 16.

245 Van Doesburg, Principles of Neoplastic Art, 12.

246 Moholy-Nagy, Painting, Photography, Film, 15.
observed in *Domus la casa dell'uomo* and other projects in which Ernesto Nathan Rogers was involved; the columns of photographs that frame the text of Marco Zanuso and Paolo Chessa's articles on prefabrication recall the aesthetic of *The New Vision*. The golfer swinging his club depicted in strobe photography, often cited as an emblem of "The Form of the Useful," an exhibition on industrial by BBPR with Max Huber, shown at the VIII Triennale, resembles similar photographs by Herbert Matter and Harold Edgerton, in *The New Vision*.247

Moholy-Nagy had discussed the architectural work explicitly in *Painting, Photography, Film*, and his comments about this realm anticipated an extension of the painter's purview to architectural finish materials—"steel, nickel, artificial materials, etc."—and dwelled on the painter's potential in the architectonic work, as Ballocco would later do.248 Moholy-Nagy observed that "practice shows that it is possible, indeed, even for later ages, very probably essential, to call in the 'painter'—the expert—for the colored details of the rooms."249

In effect, for Moholy-Nagy, architecture, along with other forms of art, is a medium of color, the basis of the "optical experiences"

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248 "[F]unctional use of the building material: concrete, steel, nickel, artificial materials, etc., can unequivocally provide the color scheme of the room and of the whole architecture." Moholy-Nagy, *Painting, Photography, Film*, 18.

249 Ibid.
that human beings pursue as part of their physiological makeup.

Accordingly, even the exteriors of buildings are determined by the dictates of "organization" and subordinate to interiors designed for "atmosphere and comfort."  

The centrality of color, and several other details in the positions of Zanuso, Ballocco, and Bruno Munari, could have been taken directly from Van Doesburg or Moholy-Nagy, whose ideas they may have known through Bauhaus graduate Xanti Schawinsky, or the painter/photographer Luigi Veronesi (on whom more below). The operation of architecture as a medium is implied by Zanuso in "Architettura e pittura";

[Painting] can count as a chassis that is no longer necessarily as neutral as the square or the partition but that is in space, in three dimensions, with infinite variability of light, of relief and with all the reciprocal relationships of planes across which new figurative themes of pluridimensionality can be developed.  

In Milanese art circles, such a collaboration had been demonstrated in the 1930s in various collaborations at the Milan Triennale, and also at Como, in Giuseppe Terragni's Casa del Fascio,

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250 "[T]here can be virtually no question of sovereign use of color. If only because from now on color will presumably be used in external architecture simply as an aid to organization and in interior architecture to increase the effect of atmosphere and 'comfort.'" (18) Elsewhere: "[C]olor composition itself as the sovereign expression of a man in his spiritual and physical essence must develop further along its biological path, beyond the transient truth of form-determining events." Moholy-Nagy, Painting, Photography, Film, 19.

251 Marco Zanuso, "Architettura e pittura," 43. ("Essa si può valere di uno châssis che non è più necessariamente piano come il quadro o la parete ma che è nello spazio, nelle tre dimensioni, con infinite variabilità di luce, di rilievo e con tutti I rapporti reciproci dei piani attraverso I quali possono essere sviluppati nuovi temi figurativi di pluridimensionalità.")
in which the meeting room interior designs were the work of the painter Mario Radice, of Como.

Moholy-Nagy is among the artists whose names Zanuso casually mentions in "Architettura e pittura," and in fact several details of Zanuso's depiction of architect-painter collaboration could have been taken from the Hungarian Bauhaus teacher. The emphasis on monochrome; the short history of painting; the observation about architecture tending to monochrome and painting to pure color relationships; and the emphasis on the ideally "autonomous" character of the architect's and painter's interventions; all of these ideas in Zanuso's essay had appeared in Moholy-Nagy's volume.\(^{252}\)

The way that Zanuso imagined a synthesis beyond the mural on the wall is analogous to Moholy-Nagy's concept of the "Gesamtkunstwerk." In his account of the unity of the arts, Moholy-Nagy had made reference to the "GesamtKUNSTwerk" concept (my emphasis) associated with the Bauhaus and De Stijl, but pointed to something more profound and wide-reaching. Rather than the mere unification of art products in the synthetic work, what was needed was a more thoroughgoing work in which art would automatically inhere. "The Gesamtkunstwerk is only an addition," he wrote; what was called for was a Gesamtkunstwerk or "total

work." Accordingly, for Moholy-Nagy, "unity" meant an abiding atmosphere of interconnectedness; it would arise in the character of life, in the most general sense; the artwork would be a detail in this larger whole.

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253 "What we need is not the 'Gesamtkunstwerk,' alongside and separated from which life flows by, but a synthesis of all the vital impulses spontaneously forming itself into the all-embracing Gesamtweg (life) which abolishes all isolation, in which all individual accomplishments proceed from a biological necessity and culminate in a universal necessity." Moholy-Nagy, *Painting, Photography, Film*, 17. Originally, "Gesamtkunstwerk" was coined by the German composer Richard Wagner.

254 Unity "will have to be produced by conceiving and carrying out every creation from within its fully active and therefore life-forming propensity and fitness." Ibid., 18.
The Discourse on "Synthesis of the Arts" in Architecture

Marco Zanuso's involvement with the "synthesis of the arts" placed him in a group of Milanese architects who all took an interest in incorporating art into their buildings. There were a sufficient number of examples by 1957 for another architect, Carlo Perogalli, to survey them and consider their common characteristics. Perogalli would conclude that Zanuso's building on the Viale Gorizia was not a proper synthesis. Nevertheless, he assigned important position to Zanuso and Roberto Menghi based on the building on the Via Senato, and began his brief history of the engagement of architects and artists in Milan, since the War, with that building. He explained that he included this project because it was set on two typical Milanese streets that have kept their basic shape in spite of filling in of old canal; because it was located directly in front of an historic building, the Castello Elvetico, complicating the architects' task; and because it had been the first postwar attempt at a synthesis of the arts, "in spite of suffering, in the large glass wall, from an effect of reflection more than transparency, to the detriment of the

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The genre sketched by Carlo Perogalli, in "Architettura, Ambiente, Sintesi Artistica nella Milano Post-Bellica" (cited above), could be placed in a wider selection of theories which, examining architecture alongside other forms of culture, advocated the relationship or juxtaposition of architecture and art. The architect Luigi Moretti led one such discourse, through the journal Spazio; Leonardo Sinisgalli, editor of Civiltà delle macchine, shepherded another between 1949-1953. For an overview of Civiltà delle macchine, see Giuseppe Lupo, Sinisgalli e la cultura utopica degli anni trenta (Milan: Vita e Pensiero, 1996).
abstract ceramics of Lucio Fontana."  

Perogalli proceeded to offer a list of other buildings and their architects.  

Evidently, Perogalli did not define the synthesis of the arts in terms of collaboration between architect and painter, as Zanuso did. However, his connection to the arte concreta is demonstrated by the several essays he wrote for the journal A-Z. In one, Perogalli expressed skepticism about the synthesis of the arts, suggesting that various architects and engineers whose work exhibited a relationship with art owe all or part of their notoriety to their own work in painting or sculpture, citing Le Corbusier, Alexander Calder, Juan Gris, Max Bill, and Matta.  

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257 Ibid., 418, 419. Among the buildings singled out by Perogalli as achievements on this theme were Ignazio Gardella’s Galleria d’arte contemporanea; a building by Vito Latis in the Via Lanzone; a building by Ernesto Bianchi and Carlo Paccagnini, with a mosaic by Roberto Crippa; a house in the Via Molise by Tito Varisco; the Casa d’Angolo "corner house" by Luigi Caccia Dominioni; and a trio of buildings by Gino Minoletti on Via Fatebenefratelli, and Via Lanzone. Perogalli also discusses his own buildings, designed with Attilio Mariani; a building by Giordano Forti; one on Viale Romagno by Vittorio Morasso and sculptor Gianfranco Fasce; one on Via Cimarosa by Giandomenico Bellotti and Luigi Cosentino.  

258 See, for instance, "L'architettura non interessa?" A-Z arte oggi 2:2 (Feb 1950): 1. By contrast, Marco Zanuso did not have any essays published in A-Z, although his acquaintance with the circle was reflected in his appearance in an article called "Encounters," in which his speculations on a solution to the estrangement between artists and the public was featured alongside the analogous perspectives of a mixed group, including industrialists, publishers, and other non-artists. "Incontri" A-Z: arte oggi 2:2 (Feb 1950): 2.  

The difference between Zanuso's concept of a synthesis and Perogalli's is reflected in their respective buildings. In the "Casa astratta" (1951-1952), by Perogalli (with Attilio Mariani), the balconies on a pale apartment block were painted blue and arranged in an abstract composition on the front of the building.\textsuperscript{260} [fig. 2.13] In a second condominium built next door to the first (1956-1957), alternating colors of brick form a checkerboard pattern close in scale to the windows, along with the window pattern and the faint black grid of the metal balcony railings. Each of these buildings has a distinct artistic aspect, the pattern serving to highlight a "figure" or enrich the "ground" in the elevation.

For Perogalli, synthesis was measured in material terms, having to do with the interlacing of building and decoration. This is exemplified in the brick on the second building, whose edge is exposed at the corner to demonstrate the contribution of the brick to both decoration and construction; and the integral nature of the pattern in the wall section.\textsuperscript{[fig. 2.14]} To Zanuso, for the interventions of the painter to be limited to "underlining the motives of architecture itself" made for an uninteresting result. By comparison, wherever "an autonomous pictorial structure develops on an architectonic structure," the painter's intervention would "live" in the architecture. Zanuso describes "a total result that elaborates itself

in space with values of lines, spaces, volumes, colors, lights."\(^{261}\) One can see from photographs of the Viale Gorizia building that Gianni Dova's intervention adhered to an independent logic, capable of interacting with the architecture precisely because it was consigned to a distinct layer, the building's surface.

Zanuso's conception of the "synthesis of the arts" (and that of Ballocco and Munari) was also different from the idea that would predominate in the Movimento Arte Concreta itself between 1952-1953. The push toward a "synthesis of the arts" had a life of its own among the artists of the Movimento arte concreta. It would be the theme of a 1952 show at the Galleria dell'Annunciata in Milan, held by a "current that will go under the name of 'synthesis of the arts' and that will tend precisely toward the union of painting and sculpture, the so-called 'lesser arts,' in architecture."\(^{262}\) The goal espoused by this group, which included a handful of younger architects who joined the artists during this period, and called themselves "Studio B24," was to eliminate the idea of a proprietary content in art, and focus on "pure" research (an echo, here, of the "primordial") to apply art to practical problems.\(^{263}\) One manifesto proposed to "overcome the canvas

\(^{261}\) "The problem becomes more interesting when an autonomous pictorial structure develops on an architectonic structure, that is to say bringing a vitality of its own from the synthesis of the elements that compose it; this will live in the architecture with a particular accent of consanguinity [consanguineità] that permits the work in its complexity to reach a total result that elaborates itself in space with values of lines, spaces, volumes, colors, lights." Zanuso, "Architettura e pittura," 45-48.

\(^{262}\) Schwarz, Pittura italiana del dopoguerra, 101.

\(^{263}\) Ibid. The StudioB24 group included Bobi Brunori, Gigi Radice, Mario Ravegnani.
and sculpture as ends in themselves, to merge them with architecture in a sole activity, in an 'artistic synthesis.'”

In another statement, the group referred to the "'useless personalism of the romantic arts.'” This later development of the movement seems to have condensed the ideas considered above, found in the writings of Zanuso, Ballocco, and others; but it was short-lived.


265 Ibid., 100.

266 After the death of the painter Atanasio Soldati in 1953 (Soldati had been a key figure in astrattismo and served as an inspirational figure for the arte concreta), and following a proposal by Gianni Monnet, the arte concreta accepted the invitation to merge with the French "Groupe Espace," led by André Bloc, editor of *L'Architecture d'Aujourd'hui*. The result, known as "M.A.C.-Espace," was launched with a show at the Galleria del Fiore in Milan in May 1955. The new manifesto was written by Gillo Dorfles, who remained affiliated with the group. Ibid., 97-102. More research is needed to more precisely establish Bloc’s connection to the M.A.C.
Stile Industria (1954), a Program by Architects for Industrial Design

Marco Zanuso's collaborations with artists, c. 1950, demonstrate that he shared two ideas about the placement of the industrial product in the object with contemporary artists that had resumed the prewar discourse on the synthesis of the arts and the appropriation of the product by the artist. The architect could apply the product to the surface, as demonstrated in the Santoflex Office and Viale Gorizia building; or he could integrate his architectonic scheme for an object with a mural or three-dimensional painterly intervention that had its own aesthetic coherence.

Both of these approaches can be seen in Zanuso's designs for industrial products; and they are both legible in the objects exhibited in "Selected Examples of Italian Industrial Design," a show of industrial design objects, curated by Zanuso and exhibited in London in 1955. To place that exhibition in the context of early Milanese industrial design, the interest of other architects with whom Zanuso associated, in the art concret and the industrial product, should be noted. One important event was the launch of a program for industrial design in the journal Stile industria, which was published by Domus Editoriale (publisher of Domus) and first appeared in 1954, edited by the architect Alberto Rosselli.

In part, Stile industria continued the aesthetic project that is documented in A–Z. Architects and artists who had taken part in the A–Z discourse, and were also early contributors to Stile industria,
including Alberto Rosselli, Bruno Munari, Gillo Dorfles, Ettore Sottsass, and Zanuso himself. The first issue of Stile industria, published in 1954, showed how the concepts nurtured in the cultures of the arte concreta, and in the field of commercial arts, could be combined to form a provisional theory of industrial design.[fig. 2.15] Subsequent issues of the journal would feature accounts of the events that soon comprised a calendar of the design "seasons": the Triennale and other exhibitions, the awarding of prizes, the meeting of the industrial design association, and reporting on similar events overseas. But in the first issue, the conceptual setting and cultural stakes of industrial design as a putative art form were especially clear in the centrality of the carrozzeria—the body or shell affixed on a structural frame—as a conceptual tool with which to grasp the industrial product as an object. For the practical combination of technical and functional parts and assemblies, Alberto Rosselli's and Gio Ponti's examinations of the physical paradigm of the carrozzeria offered an accommodating schema. Meanwhile, a theoretical essay on form by Max Bill proposed a plausible means to authenticate the design of the shell in terms of the reconciliation of technology, art, and nature.

The automobile was the subject of an article by Gio Ponti, in which he described his redesign of a car in a collaboration with Touring, the car-body-maker.267 Ponti understood industrial design as

the redesign of existing forms in terms of aesthetic simplicity and functional improvement, and took an interest in the carrozzeria, or outer shell of the object, as a mediator between excess and economy. He was concerned with the aesthetics of the object, not with a narrow focus on the sensuous aspect, but with that dimension which incorporates function. The shell of an object could be adapted to any shape. But this should not to be confused with "styling," which Ponti inveighed against.

Ponti was critical of cars "in crinolines." Their uselessly long, awkward shapes block the driver's frontal and diagonal vision; they have voids and "jaws" just to "make a form"; in their reduced interior compartments, one can't rest his head or stretch his legs; and so on. In their place, Ponti appeals for the "dry, severe line";

[T]he form of the useful, the dry, severe line, without bizarreness nor waste, aerodynamically correct in proportion to the limits of its speed, toward the form from which nothing more can be cut without diminishing efficiency, toward simplicity, toward justifiable elements and spaces.²⁶⁸

In contrast to the arbitrary swoops of American "streamline" design, Ponti's car body was drawn conservatively close to the chassis and had its edges creased, not curved. The new carrozzeria was not focused on "false formal impositions of aerodynamic aspects"; instead, it was "a result of a relationship among external and internal form, among exigencies of use and purity of line, among technical efficiency

²⁶⁸ ("Occorre procedere—dice Gio Ponti—verso la 'forma dell'utile,' la linea asciutta, severa, senza bizzarrie nè squaiatezze, correttamente aerodinamica in proporzione ai limiti delle velocità, verso la forma alla quale non si possa togliere più nulla senza diminuire l'efficienza, verso la semplicità, verso gli elementi e gli spazi giustificabili.") Ponti, "I principi di una carrozzeria," 4.
and originality of form." The tall windows, and the placement of a fabric-covered compartment in the trunk which would zip closed to keep luggage in place, illustrate Ponti's attention to specific individual aspects of the design. [fig. 2.16]

Ponti wrote that car-making had reached a point of clarity and sophistication that implied a place for the artist as one who can decide how to wrangle the formal dictates of performance honestly, as opposed to "false formal impositions of aerodynamic aspects" or "appearances that have a referent only in fashion" or "an aestheticism empty of substance." He added, "The design of the car must be in this sense as yet a new term, because until now only rarely has it been confronted with a spirit free of formal tradition and revolving around the very substance of the problem." Thus Ponti regarded the car as a formal problem for which an artist or architect was amply prepared.

The editorial of the issue, by Alberto Rosselli, abstracted the concept of carrozzeria away from the car in particular. For Rosselli, this is just a way to describe an object with an outer shell that can be formed into any shape, supported on a structural frame. Rosselli's essay compared two examples of a desktop stapler. The later model had an outer shell, which Rosselli describes as "carrozzeria," and serves

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269 Ponti's notes, in an English-language caption, read, "[M]aximum front-diagonal vision obtained by means of flattened out wing design"; "flexible, spring-mounted rubber fenders" (bumpers); "a white rubber [bumper] is fitted along the sides themselves." Other criteria on Ponti's list included "the largest internal space for the minimum external bulk," "maximum traveling comfort with adjustable back seats and detachable headrests," and the trunk divided into compartments, the lower one containing a spare tire. From the English-language caption, Ponti, "I principi di una carrozzeria," 5.

270 Ibid., 4.
as the sign and bearer of cultural value. The staplers, Rosselli writes, "have the same function, the same dimensions, but their forms are different: they are two models produced in different periods." The "technique" behind the first was "obsolete." The newer stapler was superior because it corresponded to an abstract shape that is both aesthetically charged and determined according to use. The carrozzeria is the site of reconciliation of aesthetics and function, giving the new stapler a formal identity and at the same time a "new efficiency."

A yet more abstract theme, "form," was placed at the front of the first issue, in an essay by the Swiss artist/architect/designer Max

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272 "The technique in its primitive expression of the mechanical parts (as may be seen in the preceding example) seems here to be an obsolete experiment and furnishes an example of a concluded phenomenon in its limits of perfection and of a unity almost complete anyway." Ibid. (paraphrase).

273 "The mechanism is enclosed in a light carrozzeria that protects it, the profile serves the hand that makes it work, the elements necessary for its function stand out in the simplicity of the complex . . . . The conceiver, technician or artist, did not pose to himself with certainty the question of the invention of a new mechanism (not to mention its perfection), did not research a superior utility of the project (the preceding model had reached it), but a new efficiency, more complex and complete, an efficiency at once technical, functional and aesthetic." Ibid. (Paraphrase).
Bill. The inclusion of his essay in *Stile industria* cast Bill in the role of a presiding figure for Italian industrial design. The choice most likely reflected Bill's new role as the head of the Hochschule für Gestaltung in Ulm, Germany, which had opened in 1952, as well as his importance to *art concret*. In his article, Bill used a chain of aphoristic identifications to characterize "form" as a model for art, entailing an intersection of art, nature, and technology. "When we speak of form in nature we think of what is typical and perfect," he wrote. He related form to function; "[W]hen we think of the notion..."

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274 Max Bill had studied architecture and painting at the Bauhaus in Dessau, where he was a student of the painters Wassily Kandinsky and Paul Klee, as well as the architect Hannes Meyer. He had been the subject of a brief profile in *A-Z*: a short biography illustrated with an image of an exhibition design ("Good Form," Basel, 1949) and a house made of prefabricated parts (1942). "Max Bill" *A-Z arte oggi* II:4 (Apr-May 1950): 3. Prior to that, Bill's work had been featured in *Domus la casa dell'uomo.* [Max Bill, "La costruzione concreta e il dominio dello spazio," *Domus la casa dell'uomo* 210 (1946), 18-21; and Hans Kaiser, "'Continuità' di Max Bill," *Domus la casa dell'uomo* 223/224/225 (1947): 30-3. See below.] There are limits to the extent to which Bill exemplifies the "industrial aesthetics" of *A-Z* on one hand, or the industrial design of *Stile industria* on the other. Arguably, Ballocco's exhibition was an Italian version of Bill's "Gute Form"; but as painters, Ballocco and Bruno Munari had stressed the stakes for painting of the public role of "functional art." Munari had written that "art concret has the possibility of an advantageous contribution to industry and society." [Bruno Munari, "Arte e industria" *A-Z arte oggi* 2:4 (Apr-May 1950): 3.] ("l'arte concreta ha la possibilità di portare un contributo vantaggioso per l'industria e per la società.") By contrast, Bill was preoccupied by connections between design and ideal forms.

275 The implication of such essays was to nominate the designer as a supporter and guiding light. For *Casabella-Continuità* (1954), the analogous endorsement would be from Walter Gropius; for *Zodiac* (1957), Walter Gropius and Adriano Olivetti; for Bruno Zevi's *Metron* and "organic architecture" movement, Frank Lloyd Wright] By 1954, Bill had designed the campus of Europe's first industrial design school—the Hochschule für Gestaltung at Ulm, Germany—and become its rector. This gave him an international profile as an authority on design.


277 Ibid., 2.
of form or when we hear this word, we have the vision of something that in its aspect possesses those typical characteristics that are conformed to the propriety of its function."\textsuperscript{278} It followed that form provided a criterion for critical judgment of everyday objects. Form is not aerodynamic styling, nor any other kind of stylization.\textsuperscript{279}

Bill summarized his argument in a concluding syllogism:

If on one hand, form is the harmonic unity of the sum of all functions, and on the other hand, form equals art equals beauty, that implies that even art is a unique harmony of the sum of all functions, just as beauty is. . . . When we speak of forms of technology, we don't refer to common and fortuitous results, but only to those that impose particularly just solutions on our attention.\textsuperscript{280}

Bill's essay reiterated the basis of his concept of the "Produktform," elaborated in association with his exhibitions on "Gute Form" ("good form") that had traveled around Europe as a showcase of Swiss industrial design. In \textit{Stile industria}, his claims about form, technology, and nature were visually underlined by a juxtaposition of one of his sculptures, whose twisted metal form resembled a moebius strip (a curved shape with the appearance of a single continuous surface), and a lamp, whose identical conical forms were joined by a flexible metal conduit.[\textit{fig 2.17]
Art had been the theme of several articles in *Domus la casa dell'uomo*, between January 1946 and December 1947 (205-225), while Zanuso was editor.281 Among these were a number of articles on art concret.282 These articles were more speculative than programmatic. The Finnish architect Alvar Aalto addressed the theme in an essay in late 1947, in the very last issue of *Domus la casa dell'uomo*. Posing the question "why art concret?" Aalto remarked,

[P]erhaps the point resides in the fact that art concret is a simplification that allows the transmission of sentiments alone. In our days, therefore, a poor human, a purely human sentiment that written language has in some sense been obscured . . . art allows its birth and, by extension, [an] enormous accumulation of intelligence, nature and human sentiment.283

Above, the discussion of the arte concreta focused on artists like Ballocco and Munari, who established themselves in relation to abstract art between the wars. But art concret was also a theme of

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281 Essays on art in *Domus la casa dell'uomo* covered the gamut of art history from the sculpture on the Baptistry at Pisa, by Carlo Ragghianti (issue 217) to Gillo Dorfles's occasional reviews of contemporary shows and tendencies.

282 An article by the art critic Lionello Venturi, in *Domus la casa dell'uomo* 205 (1946), was a first postwar treatment of abstract and concrete art, followed by an essay by Gillo Dorfles in *Domus la casa dell'uomo* 217.

283 Alvar Aalto, "Architettura e arte concreta" *Domus la casa dell'uomo* 223/224/225 (1947): 3. Aalto took care to explain that while he was not a vocal advocate of "more painting" in architecture, he himself drew as a way of giving himself over to his "intuition," when facing architecture's complexity—its social, physical, economical aspects—to summon "the courage of three in the morning" (my paraphrase). Appraising art concret, Aalto settled on an emotional response as his criterion of judgment: "Either I feel something, or I don't feel anything.'" ("O sento qualcosa, o non sento nulla" . . . Forse il punto sta proprio nel fatto che l'arte concreta è una semplificazione che permette di provare solo dei sentimenti; ai nostri giorni, dunque, un'arma umana, un sentimento puramente umano che la lingua scritta ha in qualche modo smarrita. Ma ciò a condizione che l'arte permetta sul suo nascere e in seguito, quell'enorme accumulo dell'intelligenza, della natura e dei sentimenti umani di cui s'è detto sopra.") Ibid., 11.
interest for Ernesto Nathan Rogers, and for him, the promise of the movement was embodied by Max Bill. *Domus la casa dell'uomo* 210 had featured an essay by Bill on the theme of the conquest of space.\(^{284}\) In contrast to Aalto, Bill wrote in general philosophical terms focused on geometry, not literal descriptions of architecture.\(^{285}\) A more suggestive essay on the significance of Bill's art was the review of one of his sculptures by Hans Kaiser.\(^{286}\) "Continuità," a strip-like structure with a continuous surface, was on display in Zurich in a park by the lake. Kaiser writes that the sculpture presents an equilibrium between the "vibration" of art and the banality of the useful; he writes of being able to appreciate this after seeing the piece for the second time, following a walk through Zürich.\(^{287}\)


\(^{285}\) To paraphrase Bill: man's conquest of space is a given; only in certain examples does it serve to place man in the spatial world. Man constructs dwellings, factories, churches, and as high as the value attributed to any of these, so much the more does it serve to detach man from his surroundings. The various volumes divide space in a particular way. Ordering and dominating it, these constitute the feeling and the measure of this space. Man detaches himself from space and gives himself a specific position through geometry. Bill adds that we experience this every day in architectonic and technical constructions, often the works of engineers. Ibid., 19.


\(^{287}\) "Precisely because I found myself in front of a work completely distracted from the utility in an atmosphere full of useful things, the exposition appeared to me to be ennobled by 'Continuità,' by this grandiose introduction, and only truly complete in its lineaments."("Proprio perché mi trovavo di fronte a un'opera completamente distratta dall’utilità in un ambito ricolmo di cose utili, l'esposizione mi è apparsa come nobilitata da Continuità, da questa grandiosa introduzione, e soltanto allora veramente compiuta nel suo assetto") Ibid., 31.
Rogers's use of art as a metaphor in a short piece on fashion reflects an attitude similar to Kaiser's. The essay, written in early 1947, stressed the combination of different qualities. "The concrete work of art is realized in intermediate zones, in the conjunction, the compromise and the dialectic contrast of those values each of which, by itself, is incapable of creating vitality," Rogers wrote. In light of these examples, art concret was a topos for Rogers's conviction that architecture and decoration must be discrete from one another, providing a figure for an overall work of art that can host dualities such as novelty and banality, risk and safety, beauty and utility.

By 1954, when the Stile industria discourse began, the physical paradigm of the utilitarian chassis and aesthetically-enriched body, for the industrial design product, had already won acclaim as it was instantiated in the Olivetti typewriters. In 1952, Olivetti had been the subject of an exhibition at the Museum of Modern Art, in New York. A centerpiece of the exhibition was the "Lexikon 80" typewriter (1947), designed by Marcello Nizzoli. Notes in the museum Bulletin dedicated to the show proclaimed it "the most beautiful of the Olivetti machines," and compared its outer shell to "a piece of sculpture worked by the hands of a sensitive artist." Thus, the Olivetti product had demonstrated the potential of industrial design

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to be designated as art, with the implications of cultural value that selection by the Museum could signify.

The transition from object to print—the assimilation of form to the photograph, and the further composition of photographic and figural graphics—was another aspect of industrial design as conceived by the Stile industria circle, circa 1955. An article in issue 1 about an advertising campaign for the Società del Linoleum, referred indirectly to the showroom Zanuso had designed in 1951 with Mario Ballocco and Gianni Dova, and indicated how these designs were presented in the publicity of the time. The article was an appraisal of an advertisement campaign for the same company, by Albe Steiner.\(^{290}\) As seen in the article’s illustrations, Steiner’s advertising graphics were a manipulation of the tension between two and three dimensions suggested by an abstract trapezoidal shape resembling a table.\(^{[fig. 2.18]}\) One especially ambiguous figure, which does not quite work in three dimensions, serves to reinforce the game. Steiner’s window displays are also mentioned, and these can be seen to have formed a system of interrelated representations. These were shallow boxes made with panels of flooring, employing tilted floor plates to suggest a larger three-dimensional space. The displays blocked any view of the actual interior space, but even in the display that most resembles an actual interior space, the physically separate floor plate, whose independence from the walls is emphasized by a space and a shadow,

announces artifice. The configuration is confirmed by a section
drawing in Marco Zanuso’s archive, on which an installation resembling
Steiner’s vitrine—a trapezoidal box propped on sawhorses—appears to
have been lightly pencilled in.\textsuperscript{291} \fig{2.19}

Marco Zanuso’s Linoleum Showroom (designed in collaboration with
Mario Ballocco and Gianni Dova) was featured in other advertisements
by Steiner as well, also for the Società del Linoleum. These further
demonstrate how the design of the space lent itself to print
representations and publicity by way of a compositional strategy.\textsuperscript{292}
The insinuation of shapes into the image, and the use of similar
shapes in the photo and on the page, allowed the designer to integrate
the photo into the overall composition. In the layout of \textit{Edilizia
Moderna} 48, in which the Linoleum shop had appeared, in 1952,
Steiner’s graphic work operated in this manner, taking advantage of
the artists’ interventions for his own compositions, both on the cover
and in advertisements for the Linoleum showroom in the same journal
issue.\textsuperscript{293} The arc of the stair and curve of the desk could join with to
the wedges of color on the floor and disks on the wall in a plausible

\textsuperscript{291} 008 Negozio Linoleum 001, FMZ MZ MICROFILM, Pondo Marco Zanuso.
FMZAMM.

\textsuperscript{292} Albe Steiner (b. 1913 at Milan, d. 1974) had his own graphics
office, LAS, with wife Lica Steiner, in 1938-1939, but had shown work in a
collective show at Galleria del Milione in 1933, and belonged to the same
avant-garde circle as the Campo Grafico designers. After partisan activity
during the war, Steiner worked with Elio Vittorini on \textit{Il Politecnico}, and
joined Luigi Veronesi and others as founders of an informal graphic design
school, among other postwar activities. Biografia http://
6, 2010].

\textsuperscript{293} The Società del Linoleum, Zanuso’s client, was also the publisher of
\textit{Edilizia Moderna}. 
perceptual sequence. The rapport continued with the graphic designer, who could connect the painter's shapes in a photograph to his shapes on the page; and could enter into the page's incorporation in the magazine, of one issue of the magazine into the sequence; and so on. [fig. 2.20]

By surveying graphic arts, publicity, and other occupations related to industrial production, Stile industria made a statement about the common relevance and fate of these pursuits as concomitants of the industrial economy. The commercial artists who were represented brought with them a line of modern-art discourse that had developed in the commercial print realm, in which mechanical reproduction techniques were already a theme during the 1930s. These protagonists, too, had ties to the arte concreta, but in contrast to the artists associated with A-Z, they had a distinct discourse on some of the same themes, including the potential of mechanization to eliminate the subjectivity associated with art. They had already confronted problems of production (in their case print production); and they had their own experience of ideas from the Bauhaus.

Among artists in this group, in addition to Steiner, an important contributor to the aesthetic of Stile industria was the artist Luigi Veronesi, a painter, photographer, and writer on graphic design who advocated compositional strategies that could reverberate within the
graphic work. During the 1930s, Veronesi had been a director and contributor to the journal *Campo Grafico*. The article "Fotografia," in *Stile industria* was an extended caption for a selection of his photograms.\(^{295}\) The subject of photograms recalls an essay on photography from *Campo Grafico* 12 (1934), in which Veronesi had commented on photomontage as the ultimate modern art form, stressing the objectivity of the photographic image (in much the same terms as Moholy-Nagy had done, in *Painting, Photography, Film*).\(^{296}\) In the earlier article, Veronesi had defended the importance of photography, maintaining that drawings were inevitably individual and carried an "atmosphere," while photographs were universal.\(^{297}\) [fig. 2.21] The mechanical means (the photograph) was an advance on hand-drawn representation. Photomontage was complex by definition; but this

\(^{294}\) Veronesi, a figure of considerable stature in Milan, had participated in the early abstract art movement in Milan, in exhibitions including a joint show with Joseph Albers, at Galleria dei Milione. He had collaborated with poet-engineer Leonardo Sinisgalli on an illustrated book on geometry, *Quaderno di geometria*, in 1936; and he had shown his work internationally during the 1940s. Veronesi's work had been included in the first postwar arte concreta exhibitions in Milan, including a show at the Galleria del Naviglio in 1950 (not far from the site of Zanuso's apartment building on the Viale Gorizia) with painters of surrealist, spatialist, and other parallel genres along with *arte concreta*. Veronesi had also curated the exhibition section on De Stijl in the IX Triennale (1951), mentioned in Marco Valsecchi, "Giro d'orizzonte alla T9," *Edilizia Moderna* 47 (1951): 56.

\(^{295}\) "Fotografia," *Stile Industria* 1 (1954): 24-25. The author (unnamed) remarks that Veronesi "represents in a special way the research toward a new expression by new technician means"; through experiments in photographs, photograms, and cut metal, Veronesi had reached an "original art form," an "abstract poetics" closer to contemporary art than to photography.(Ibid.)

\(^{296}\) Luigi Veronesi, "Del Fotomontaggio," *Campo Grafico* 12 (1934): 278.

\(^{297}\) Ibid., 278. Issue 12 was devoted to Studio Boggeri, featured several page compositions by the firm, each with a photograph, or photogram, tacitly announcing its aesthetic sympathy with the work of Moholy-Nagy and other experimental artists at the Bauhaus.
complexity afforded the incorporation of the technically produced part into a larger project. Photographic technology offered the artist greater precision and objectivity, but the product of mechanization had to be set in a composition in which it could be imbricated a larger framework of meaning (according to Veronesi).298 In the introductory issue of Stile industria, articles on the chassis and body related to the assembly of utilitarian and figurative elements in three dimensional form; Veronesi's work stood for the corresponding theme in two-dimensional art, and for the bridging of two and three dimensions.

On the face of it, Stile industria 1 outlined a synthesis-of-the arts discourse that proposed to claim for art and architecture a production paradigm that was borrowed from the industrial arts. Mass production would be developed under the guidance of modern art, and art and production would exchange strategies and values. Thus understood, it was an attempt to configure the problem of the product in a way that placed it in the aesthetico-philosophical tradition in which the architects and artists had been educated. Meanwhile, with the inclusion of the commercial arts, the journal addressed "art" as a field that had already, before World War II, expanded beyond painting and sculpture to encompass techniques for representation in print.

298 Luigi Veronesi, "Del Fotomontaggio," 278.
Zanuso's "Selected Examples": Art in the Industrial Product

Marco Zanuso's few written iterations of the conception of the industrial object as a chassis and body, during the early years of Stile industria, often appeared outside of its pages. In one essay, written for Rivista Pirelli, Zanuso argued for the limited-production car as a paradigm for serial production of individualized products, and for the car body maker, such as Pininfarina, as a model for an industrial design practice that would create prototypes for adaptation to large-run production. An index of Zanuso's sensibility for the full scope of industrial design was the design exhibition "Selected Examples of Italian Industrial Design," curated by him and staged at

299 "In piccola serie si fa la fuori serie," Rivista Pirelli [Reprint, date unavailable]. [FMZ MZ CON 003] Fondo Marco Zanuso. FMZAMM. To paraphrase Zanuso's argument: he maintained that the Italian carrozzieri were among the best industrial designers in the world; their work could be an example for the production of many objects that have yet to receive the sustained attention that automobiles have received as industrial design objects. He added that car designers like Pininfarina already employed aspects of assembly line production, and created prototypes for larger-run production. Given that any car designer had to reconcile the structural problem, the aerodynamic shape of the car, and internal spaciousness; the designer of sports car carrozzeria would bring to bear an experience of technique and of production and an intuition of formal synthesis that is the special trait of "industrial designers" (Zanuso uses the English words here). Moreover, due to its refinement of forms to technical perfection and its elastic productive organization, the car-maker tended to be responsive to special problems arising from the need to follow a market that renews itself continually, with high quality, efficient products. Zanuso, in "In piccola serie si fa la fuori serie," attributes the car-makers' talent to their "continual research into refinement of forms of technical perfection," and their "extremely elastic productive organization." Ibid. It is important to note that in Italy, the mass production of cars was begun in the 1920s, but automobile ownership was barely four percent of the population in 1960 and would not exceed twenty percent until the early 1970s. [Paul Ginsborg, "Cars per thousand inhabitants in Italy 1950-85," in A History of Contemporary Italy (Harmondsworth: Penguin, 1990), 433]. Fiat had begun to mass-produce cars during the 1920s, but it had remained common practice to order a car body and chassis separately, well into the 1930s.

Zanuso's selection featured several object types: objects of everyday use, such as Marcello Nizzoli's sewing machine for Necchi (#12), Gino Sarfatti's floor lamps (#1-2), a typewriter and adding machine by Marcello Nizzoli, for Olivetti (#19-20); there were fragments or components of things such as a FIAT car door (#5) and a Borletti clock; and housewares such as a china set (#11), satin fabrics with patterns by Gianni Dova (for JSA Manifattura) (#13-15), and leather handbags by Valextra (#17-18). There were also high-performance objects such as the 350cc motorcycle by Moto Guzzi, shown in a wind tunnel (#9-10); a FIAT dashboard (#4); and a Borletti speedometer. (Numbers refer to plate numbers in the catalog.)

In the most literal sense, Zanuso's selection asserted the aesthetic value of the industrial object, which was still a point of contention in 1955. But Zanuso and his collaborators painstakingly represented the progress of the practice in Italy. The slender monograph for the exhibition included a short text called "Landmarks

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300 Selected Examples of Italian Industrial Design (London: Italian Institute, 1955). The show was co-sponsored by the Italian Cultural Institute, which had been founded in 1949. The exhibition was held at 39 Belgrave Square, London SW1, June 30th-July 30th, 1955.

301 The newness of the idea of the industrial as art is reflected in the comments of a British reviewer: "One may regret that the manual sewing machine ennobled by Vuillard has given place to a sort of unwheeled locomotive; but where so consistent an effort has been made to ease the problems of everyday life, sentiment may perhaps be out of place." John Russell, "Surprising Delights," Times July 9, 1955. [FMZ MZ ECO] Fondo Marco Zanuso, Archivio Moderno, Mendrisio.
in the Development of Industrial Design in Italy," by Gillo Dorfles, who summarized the steps taken so far towards the establishment of industrial design in Italy.\footnote{The events on Dorfles's list had included: the exhibition "The Form of the Useful" at the IX Milan Triennale (1951), curated by Belgioioso and Peressutti; the show on "Industrial Aesthetics" put together by Mario Ballocco at the Fiera Campionaria (1952 and 1953); a show called "Arte e tecnica," ("Art and Technique"), by the architects Albinì and Helg, with writers Anceschi and Dorfles (1953); the "Industrial Design Exhibition" at the X Triennale (1954), by Achille and Pier Giacomo Castiglioni, Roberto Menghi, [firstname] Morello, Marcello Nizzoli, Provinciali, and Alberto Rosselli; and the concurrent "Congress of Industrial Design" that took place at the same time, which involved an international roster of participants. The author also mentions the institution of the Compasso d'Oro prize, and the founding of Stile Industria, in 1954. Gillo Dorfles, "Landmarks in the Development of Industrial Design in Italy," in Selected Examples of Italian Industrial Design (London: Italian Institute, 1955) [unnumbered pages].}

The Olivetti typewriter, the Borletti sewing machine, and the motorcycle in Zanuso's show had previously been represented in one of the shows on Dorfles's list of precedents: the show on "Industrial Aesthetics" which had been organized by Mario Ballocco, sponsored by A-Z arte d'oggi, and staged in 1952 at the Fiera Campionaria (an annual "sample fair" in Milan). (An increasing attention to industry, between 1949-1952, had been mirrored in the changing subtitle of A-Z. The last issue, dated April and May of 1952, had a subtitle announcing "industrial aesthetics," and doubled as a brochure for his exhibition on "The arts and industrial design."\footnote{Begun in 1949 as "A-Z arte oggi" ("A-Z art today") the journal would grow, by the time of its final issue of 1952, to "A-Z arte d'oggi + estetica industriale" ("A-Z the art of today and industrial aesthetics").}) In notes to the show, Ballocco explained the theme with a summary of the artists' conclusions and motives which by then would have been familiar to readers of A-Z.

"These industrial products of particular aesthetic interest were
exhibited to confirm the results already achieved were chosen from a variety of types of serially-produced objects.\textsuperscript{304} Ballocco wrote about the scope of art, reprising his argument that the artist's ability to intervene in the industrial product brought new possibilities to art by allowing the painter to intervene in architecture and on various kinds of object.\textsuperscript{305}

Ballocco's selection featured products from Arflex, the company that had produced Zanuso's Lady chair and divan, and other architects' interpretations in foam rubber; Borletti with sewing machines; Olivetti with typewriters and advertisements; Motom with its scooter, "Delfino"; Franchi, with a new automatic rifle; and "Elle Erre," manufacturer of ladies' clothing from standardized patterns.[fig. 2.24] Rolls of linoleum, rubber, and other surface finishes were also included. In his remarks, Ballocco explained his intention to show the identity and possibilities of "today's materials" over "yesterday's materials."

Among the 'materials of today' were diverse types of flooring in rubber, linoleum, Prealino, Resivite to underline the characteristics of soundlessness, of resistance and of insensitivity to chemical agents offered by these new materials

\textsuperscript{304} Mario Ballocco, "Sala delle arti e dell'Estetica Industriale," \textit{Edilizia Moderna} 48 (1952): 78.

\textsuperscript{305} "It is . . . natural that industry begins to know, to appraise, and to avail itself, with the work of architecture, of the experience and possibility that the painter and the sculptor carry in themselves . . . . It remains to define what this aesthetic improvement invoked by many must be, stylistically, and the response will be given in just that work of art which, as an end in itself, continues to be a compass." Ibid., 78-80. See also, "Summaries" in A-Z Arte d'oggi + estetica industriale III:5 (1952), 1. From the English text; my emphasis.
whose vast chromatic gamut allows, in addition, more ample possibilities for the use of color. . .306

The key difference between Zanuso's show and Ballocco's was that Ballocco emphasized color and surface; by contrast, Zanuso placed a greater emphasis on the form of the object than on the colored surface—hence the impression reported by one observer of his show that Italian design was in a "classic," as opposed to "romantic" phase.307 However, Zanuso's form was not as "pure" in its focus on geometry and sculptural integrity as the concept advocated by Max Bill, as demonstrated in his essay for Stile industria 1 and his book Form (1952) or others who focused on the theme of form in Italy during the 1950s.308

A theme in the short catalog descriptions in Selected Examples of Italian Industrial Design, the relationship between form, production,

306 "[A]lso VIS shatterproof glass, and receptacles of Pirelli polyethylene and foam rubber in a few applications realized by Arflex according to the designs by the architect Zanuso, and by the architects Mariani and Perogalli." This quotation, and the following, are from the article as it appeared in Edilizia Moderna, that same year. Mario Ballocco, "Sala delle arti e dell'Estetica Industriale," 78.

307 Alan Clutton-Block, writing in The Listener, saw the show as a sign that Italian designers were disposed to confer beauty on its objects through structure rather than decoration. ["Summer Exhibitions in London" Listener July 28, 1955, p. 153.] By "classic," Clutton-Brock referred to the "classical or romantic . . . emphasis at one time on the structural, at another on the decorative element that gives beauty to a fully conceived work of art." He also wrote that Italy is capable of "design for industrial production without nostalgia," citing an interpretation of William Morris according to which Morris objected to "disintegrated" design, not machine manufacture per se. [FMZ MZ ECO (1955)] Fondo Marco Zanuso, Archivio del Moderno, Mendrisio.

308 The field of pure formal studies was pursued as a theme in Italian architecture during the 1950s, in the discourse of the journal Spazio, edited by the Roman architect Luigi Moretti; in Civiltà delle Macchine, edited by the poet-engineer Leonardo Sinigaglia; and in various exhibition installations by Sinigalli, and architectural projects by Pier Luigi Nervi.
and function, shows how form was not treated as an abstract self-sufficient end but instead was set up to refer to conditions of making the object. For instance, the blurb for the car on the catalog cover related,

[The whole front and wings of this sports car are constructed in a single piece which incorporates the accessories (headlights, bumpers, etc.). The form is homogeneous, predominantly conditioned by the requirements of aerodynamic flow: the surfaces are continuous, given the monolithic character of the plastic shell.]

The door and dashboard of the "FIAT 600cc Car" were shown as sinuous shapes in the photograph, while the text observed how the "shell-like structure" of the car body had made a chassis unnecessary.

For a handful of exhibits, the notes emphasize the combination of mass production and versatility. A lamp by Gino Sarfatti (#2) "is a multi-purpose lighting device composed of standardized elements with which it is possible to assemble different types of lamps according to the individual taste and requirements of the user."

Photographs of Zanuso's own tiles for CEDIL (#26), with Alberto Scarzella (for a Ceramics firm at Lurago d'Elba) show their potential configuration in two different monochrome patterns.

309 "FIAT V8 Sports Car," Selected Examples of Italian Industrial Design, [page unnumbered].
310 Ibid.
311 Selected Examples of Italian Industrial Design, 1.
312 Ibid., 26.
The assimilation of various factors into a stable form, the efficiency of production, and the functional versatility of the object in practical use, were all mentioned in the description of Zanuso's "Martingala" chair. The form was described as a "fluid shape," and the blurb explained connections between the conditions of production and this form, showing how the parameters of production and the final shape were constrained to each other. "New materials—foam rubber, elastic strips, metal frame—require new structural shapes. Thus it has been possible to define a fluid shape, to which the foam rubber padding, applied over a system of elastic strips, adheres perfectly." The commentator adds that "the most striking feature of the 'martingale,' the cover can be taken off as a garment, for cleaning purposes." On the production process, the commentator observes the object's amenability to both the purchaser and manufacturer.

[T]he construction of the individual components, which are completed and upholstered before they are finally assembled, can be carried out entirely 'on the bench,' thus adding to the efficiency and comfort of the workroom.

The role of form as a topos for reconciliation between the complex and simple, technical and artistic, was explicit in the coupling of the "purity of line" in the Olivetti "Lexikon" typewriter, with its "ease of handling"(#19). More subtle but still potent is the way the form lends itself to representation in print media. The cover image of the FIAT V8 car body, featuring just the sculptured outer

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313 Selected Examples of Italian Industrial Design., 22.

314 Ibid., 22.
shell, demonstrates that the attention to the shell has insured that the object is appealing in photographs. The subtraction of normally visible car parts (which are implied, for instance in the taut curve of a wheel-well), and the printing of the photograph in white on an intense red background, abstracted the object from its purpose and distinctly emphasized its sweeping outline and figural qualities. This characteristic can be seen in products throughout the catalog: in Martingala's "fluid shape," a Stilnuovo lamp (#23); and similar examples. [fig. 2.22-2.23]
CHAPTER 3


It seemed to me that I discovered interesting things, and above all, a more precise idea of the project, a greater attention to the process, a greater capacity to control programs, a new capacity to orchestrate the involvement of many, on specific problems. It wasn't the discovery of paradise. On the contrary, it opened a new terrain on which to confront productive positivism, in its more resistant forms, with the urgency of social need and formal communication. In any case, it was contact with a more complex and articulated world.

—Marco Zanuso, MEMOIR

Marco Zanuso's remarks in a 1962 interview suggested that he sought to bring industrial production to architecture, not only to enjoy the greater aesthetic liberty he found in his projects for industry (as he would put it), but also in the hope to bring production to the level of cultural aspiration of architecture, and the sensibilities of modern culture.\(^{315}\)

An enduring point of reference for Zanuso was Walter Gropius. In his memoir, cited above, Zanuso would include a passage from Gropius's essay, "A New Chapter of My Life," which had appeared in the inaugural issue of Casabella-Continuità, in 1954, as a benediction on the journal. In the passage cited by Zanuso, Gropius had spoken against

\(^{315}\) "Marco Zanuso l'architetto che crede nella funzione benefica dell'industria sull'architettura," Il Panorama Pozzi 29, January 24, 1962, 9–12. [FMZ MZ COR Folder 1962] Fondo Marco Zanuso, Archivio del Moderno, Mendrisio. Zanuso observes that industry is the only area in which the architect can give full expression to his personality; if he is lucky enough to meet an enlightened industrialist, he can do things of a certain importance.(12) (English quotations of Italian texts are my translations except as noted. In cases of paraphrase, passages in original language are appended to the citations.)
any program for architecture that would have clung to specific formal
prescriptions or prohibitions. Instead, the right use of technology
could only be determined by the "vigilance or inertness of our
brain."  

Zanuso, in his turn, would pursue a connection among technical
professions, which he regarded as an analoge of "rural artisanal
society." In his 1946 essays for Domus la casa dell'uomo, Zanuso had
staked a claim for modern architecture in the arena of industrial
production when he articulated criteria for bringing mass production
to architecture, in order to harness its speed, precision, and labor-
saving potential, to meet the need of housing. By 1963, with the
completion of the Via Laveno apartment complex, he had arrived at an
initial test of the capacity of architecture to express the industrial
era through creating a comprehensive prototype for an industrially-
produced architecture. Meanwhile, he had developed a sensibility for
efficient living, and with it, a concept for a functional interior
plan that would embody an "integrated" design, as defined by the aims
of an industrial designer. Moreover, he had found a way to respond to
Gropius's challenge by entering the new "world" of industrial design

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316 Marco Zanuso, speech delivered at "La Resistenza una Cultura che
diventa azione; architettura arte letteratura cinema," conference held at
Istituto Universitario di Bergamo March 29–31, 1985, 4–6. [FMZ ME COR 004]
Fondo Marco Zanuso. FMZAMM.

317 "[I]n the rural artisanal society, the project already unfolded
through the process of integration of multiple functions, and of the
disciplinary convergences present in culture; of the confraternity of
professions ["mestiere"] that constitute the bearing structure in the
project-making and creative act." Ibid., 6.

318 See Chapter 1.
through his relationships with industrialists and technical specialists in the field of production.

In the milieu in which Zanuso worked, these achievements could be seen as extending the limits of fine art. In a 1960 survey of contemporary art in Italy, the art historian Carlo Ragghianti (1910-1987), editor of the journal Sele Arte, demonstrated a comprehensive agenda that defied conventional distinctions between fine art and other arts.\(^{319}\) For Ragghianti, a common sensibility could be seen in wire-frame and solid works by Alberto Viani (##83-95), in the cubic sculpture experiments by Enzo Mari (##115-117), and in the pieces in burnt wood and canvas art pieces by Alberto Burri (##214-215) and Pietro Consagra (##216-220). At the same time, the scope of this survey ran the full gamut from works of urban planning, architecture, partial assemblies, exhibitions, graphic design and commercial art and the decorative arts in general, including lamps,

In his statement, Ragghianti described his selection as purposefully rejecting "any category or conventional division," in order to surpass "inadequate" or "prejudiced" accounts of the scene. He cited an "aesthetic quality" that all the objects have in common, as he explains: the "reality of the interior process that produced them, a more or less indisputable result unbound by any condition of function, destination, technique, use, history, custom, and so on."
Ragghianti's perspective on the arts mirrors that of Zanuso's circle during the 1950s. There is a suggestion of the Gesamtkunstwerk concept, of ceasing to speak of art as exceptional, given its inherence in every kind of work. Like Gropius, Ragghianti opposed specialization and observed that only a small number of independent thinkers could appreciate the alternative. On a page of works by Zanuso, Ragghianti includes just architecture: the Asilo at Gubbio, a kindergarten complex made up of a group of brick pavilions, realized in 1958-1959, is shown in a site photo and an interior view of the ceiling and lights, noting the access to the outdoors at each classroom; the Factory for Olivetti at Brazil is shown in an aerial photo and an elevation, emphasizing the distinctness of a module in both examples. But Zanuso can be identified with this comprehensive purview of architecture, industrial design, and other arts as a continuum, and approaching the products of industrial manufacture as extensions of fine art.[fig. 3.1]

323 Ragghianti also inveighs against the separate displays of the arts by "genre" at the major shows, and identifies the specialization of art critics on only painting, or architecture, as a reflection of the same problem and a factor in the neglect of other kinds of art. He faults the tendency of criticism to focus primarily on painting: much is written about painting, less about sculpture or graphic art, even less about architecture as a genre in itself, still less about artisanry and industrial design, to say nothing of photography and commercial art; and it goes without saying that whoever writes about architecture ignores painting and sculpture, whoever writes about painting ignores architecture and urbanism, and so on for the other sectors. Only a small part of artistic culture has the capacity to understand, much less to propose or explain artistic phenomena according to their real qualities, instead of according to ingrained hypotheses or prejudices that are intrinsically limited. Ragghianti, "Arte italiana al 1960," 88-91.
But by 1960, when Ragghianti issued his survey, change had already come to Milan and with it, another, more economically driven point of view. An index of the way economic revival had begun to leave its marks on Milan, and its architecture, is Milano Oggi ("Milan Today," 1958). A slender volume that offered a portrait of the city, it was a guide book, designed as a virtual tour of the city. However modest it may have been, given its small size and black-and-white printing, it provided a survey of new architecture projects that had served to display and individuate various forms of cultural activity in Milan. Shops are included, along with theaters, museums, schools, and recreational facilities, in a portrayal of shopping as a form of culture, as well as an index of economic vigor.

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324 Milano Oggi (Milan: Edizioni Milano Moderna, 1958). The book, which was edited by Gio Ponti and included texts in Italian, English, German, and Spanish, had sections devoted to the city's sights and cultural institutions, and featured a sequence of buildings and landmarks arranged to suggest a tour of the city in the timeframe of a day. With "Mattino," the exposition began with photographs of the skyline, taken from the roof of the Duomo. Suggested itineraries for walking or driving tours were included, with maps reminiscent of Piero Bottoni's anthology of Milan's modern buildings. Piero Bottoni, Antologia di Edifici Moderni a Milano (Milan: Editoriale Domus, 1954).
A "Crisis" in Industrial Design

"'Methodological' does not mean anything at all, a 'methodological problem' does not exist."325

In early 1960, Zanuso joined a group of Milanese designers, critics, and industrialists to debate the state of industrial design. The debate was hosted by the Associazione per il Disegno Industriale or "Association for Industrial Design" (ADI) and reproduced in a transcript in Stile Industria.326 The theme was the Compasso d'Oro, Italy's most prestigious design prize, which was dispensed each year by a jury made up of designers, industrialists, critics, and the head of La Rinascente (the Milan department store and sponsor of the prize). In 1959, the prize had been withheld from any Italian designer. The jury had given the award to the Council of Industrial Design in London, intending by its endorsement to appeal to the Italian government to establish a comparable forum in Italy.

Zanuso played a prominent role in the debate, expressing his indignant opposition to the jury's action. In sections of the transcript he argued with Franco Albini, and engaged the audience in a

325 Marco Zanuso, quoted in "La Discussione all'A.D.I.,” a section of Angelo Tito Anselmi, ed., "Crisi del disegno o crisi del premio?" Stile Industria 26-27 (May 1960): XI-XXX (XII). (My citations follow the page numbering in the original—an insert of several pages in the journal, numbered in capitalized Roman numerals.)

326 The debate was held on February 2, 1960, but the topic was the jury decision from the year before, in January 1959. Angelo Tito Anselmi, ed., "Crisi del disegno o crisi del premio?" Stile Industria 26-27 (May 1960): XI-XXX.
highly dynamic discussion.\textsuperscript{327} For the purpose of establishing Zanuso's position as to the significance of industrial design, what is remarkable is Zanuso's manner of defending design, in which he rejected the jury's manner of distinguishing design from architecture, dismissing design.

Zanuso's objection to the idea of a "methodological problem" was a response to the assertions made about architecture and product design by Giulio Carlo Argan, the head of the 1959 jury, whose explanatory statement was reread at the 1960 event to rekindle the debate.\textsuperscript{328} Argan had maintained that the "great methodological problems," those that "permit design to develop in a broad horizon of social ends," revolve around architecture, not design. One would

\textsuperscript{327} Anselmi, ed., "Crisi del disegno o crisi del premio?" \textit{Stile Industria} 26-27 (May 1960): XII-XIII. The copy of \textit{Stile industria} in Zanuso's archive is marked with underlining and notations on the commentators agreed with him, particularly in the section of the article in which brief statements of opinion had been submitted by members of the international industrial design community. These contributors included Reyner Banham, Arthur N. BecVar, Sigvard Bernadotte, Max Bill, Misha Black, John E. Blake, Jay Doblin, Jane Fiske McCullogh [later Thompson], James Fitch, F.H.K. Henrion, Stig Lindberg, Peter Müller Munk, Hiroshi Ochi, Sigurd Persson, Tapio Wirkkala; as well as Italian designers, critics, and industrialists G.B. Angeletti, Aldo Bay, Bruno Alfieri, Arrigo Castellani, Giulio Castelli, Achille and Pier Giacomo Castiglioni, Tommaso Ferraris, Enrico Freyre, Dante Giacosa, Angelo Mangiarotti, Roberto Mango, Giancarlo Pozzi, Pier Carlo Santini, Ettore Sottsass, and Zanuso himself. See "La nostra inchiesta," Anselmi, ed., "Crisi del disegno o crisi del premio?" \textit{Stile Industria} 26-27 (May 1960): XIV-XXVIII.

\textsuperscript{328} Giulio Carlo Argan (1909-1992) was a prominent art historian and critic, born and educated in Turin, and based in Rome from the late 1950s onward. He was active in Milanese architecture culture during the postwar period; in the late 1970s he was politically active, serving as Mayor of Rome and later as a representative in the Italian Parliament, affiliated with the Communist Party. He wrote prolifically on the history of architecture and art. His introduction to Ignazio Gardella (1957) is cited in Chapter 1 of this study. "Argan, Giulio Carlo." In \textit{Grove Art Online}. Oxford Art Online, http://www.oxfordartonline.com/subscriber/article/grove/art/T003981 [Accessed August 26, 2011].
expect to find that Argan and Zanuso thought alike, since Argan’s
topic of an important problem, in these terms, was "the
industrialization of building construction," a theme that preoccupied
Zanuso as well. However, Argan saw the industrialization of building
construction as a separate problem from furniture design and interior
design, and identified the latter with a "tendency of design to orient
itself above all toward peripheral or superficial problems (for
example, interior design and furnishings)."

Reacting to this assertion (as recorded in the transcript),
Zanuso lingered on Argan’s use of the phrase "peripheral and
superficial" and the word "methodological." Having been personally
involved in the development of industrial design for over a decade, he
conceded that design in Italy was still developing, but characterized
the current state of affairs as "the prehistory of design in Italy as

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329 Giulio Carlo Argan, quoted in "La Discussione all’A.D.I.,” section of "Crisi del disegno o crisi del premio?” XII.

330 "This crisis is particularly manifest in the tendency of design to
orient itself above all toward peripheral or superficial problems (for
example, interior design and furnishings), in contrast to the great
methodological problems (for example, the industrialization of building
construction), which alone permit design to develop in a broad horizon of
social ends." Ibid.

331 "When it is said: 'to orient itself toward peripheral and
superficial problems such as interior design and furnishings' (Is it a
superficial and peripheral problem?) while instead . . . industrial building
construction is a methodological problem . . . ! But they don't know the
meaning of words . . . . Because 'methodological' does not mean anything at
all, a 'methodological problem' does not exist, and these are the official
reports, these must serve to clarify a situation that has been carried
forward with difficulty up to now, and that at a certain point cannot be
clarified by language, by the inconsistency and by a situation that sincerely
and honestly I tell you I do not understand. And if someone here is able to
enlighten me, I will be very grateful." Marco Zanuso, quoted in "La
Discussione all’A.D.I.,” XII.
a profession or simply as a practice in productive orientation." But while Argan and others spoke of a crisis, Zanuso was inclined to think of the crisis as, at worst, a developmental stage. "What crisis?" he asked, "Maybe a crisis of growth!"

Zanuso's conception of the mass-produced building entailed the production of typological units—dwellings, or schools; and the interiors of such buildings, as well as the buildings themselves. The two levels of Zanuso's thinking about industrialized architecture—the problem of production and the cultural setting by means of the interior, were evident in a comment he made in a discussion on the prospect of the mass production of school buildings, in 1962. He implied that a proper mass production of schools would plan the updating of interior fixtures, and referred to those interior designs as "pedagogical services." In other words, for Zanuso, the industrialization of building design did not just entail the perfection and production of a building construction system. Not just

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332 Marco Zanuso, quoted in "La Nostra Inchiesta," section of "Crisi del disegno o crisi del premio?" XXVIII.

333 Ibid.

334 "In the traditional realization process there is not yet a scope of intervention that would make one think of a true and proper industrialization of the construction sector. Moreover, the field of traditional realization has not yet reached an operative level of quality based on integrated design ["progettazione"] that could be a means for the rationalization of production of the school according to modern understanding. A classic example is the fact that no school in Italy, according to my knowledge, has been designed bearing in mind the fundamental need to include ["da inglobare"] in the structure of the building, as far as possible, structures of fixed furniture and specifically pedagogical services." ["Intervento dell'arch. Zanuso nel convegno della Commissione di Indagine sulla Scuola Italiana tenutosi a Roma presso il Ministero della Pubblica Istruzione il giorno 18 e 19 dicembre 1962." Transcript (My translation). FMZ MZ SCR 003 1965 Fondo Marco Zanuso, Archivio del Moderno, Mendrisio.]
the thing itself, but also the relationship between the man and thing, was to be perfected. Thus, Zanuso's concept of industrialized architecture entailed not only the technical aspiration to apply the rationalization of buildings to the dwelling or school, but also the suggestion of alternatives of function that would be meaningful to the user or user group.

Zanuso's attitude toward the problems of industrialized architecture and industrial design, circa 1960, is further illustrated by the position he had adopted in another debate documented in Stile industria, maintaining that an architect could participate in different kinds of design without special training, as a collaborator. The theme of the debate was the scope of education required to prepare the industrial designer.335 In January 1959, the editors had published an Italian translation of a speech by Tomàs Maldonado, describing the curriculum of the Hochschule für Gestaltung at Ulm, Germany, where he was Rector.336 Maldonado's speech was reprinted in Stile industria, and the following issue featured an editorial by Rosselli and the

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335 "Discussione sull'insegnamento del disegno industriale," Stile industria 21 (Mar 1959): XXI-XXV. (Page numbers in the original, an insert of several pages within the journal, were designated in Roman numerals.)

Summarizing Maldonado's speech in his editorial, Rosselli focused on the idea of a "new educative philosophy" based on "scientific operationalism," as the controversial kernel of Maldonado's pedagogical program; "The framework of the Ulm school is geared toward the insertion of the student in a contemporary industrial reality without compromise; this seems to us to be the major point of the whole new didactic framework," Rosselli wrote. This entailed several measures that were intended to expose students to the disciplines and workplaces of professional industrial design practice, including instruction in technical subjects such as cybernetics, psychology, and information theory, as well as the formation of institutes at the school, mirroring the structure and activities of actual production firms.

Among the responses from the design critics, the aesthetics of the mass-produced product was a predominant theme. Reyner Banham reiterated his view that a transient aesthetic should be embraced and cultivated. The forms of mass-produced things should remind the observer of their transience.

Objects produced in series, according to anti-traditional and sophisticated technologies, can reasonably assume extraneous and artificial aesthetic aspects. These aspects, exposed to every influence of style, present a notable mutability—they represent,
according to an expression used in England, a 'consumable' aesthetic (Gillo Dorfles suggests that the symbolic content of everything aesthetic is consumable). The use of the 'aesthetics of consumability' has been condemned by a few theorists as 'an artificial obsolescence,' a phrase that I regard as meaningless. . . .339

Banham attributed to Gillo Dorfles a concept of the "consumable"; Dorfles, in the same discussion, expressed agreement;

Concepts like that of 'information,' 'communication,' 'consume,' 'entropy' can no longer be ignored by whoever tries to confront the problems of Industrial Design, of serial production; . . . . the industrial object must be, from the beginning, conceived for consumption by the masses.340

In addition, Dorfles advocated the presence of the designer in the production sphere, to maintain the intentions of "pure art" and to keep track of "economic, linguistic, psychological" aspects of the economic problem constituted by the product. He sided with Maldonado in advocating that design students learn "cybernetics, information theory, analysis of language, of motivational psychology, of symbolic logic," lest they be compelled to "grope in the dark at the moment of indicating the needs and necessities posed by his profession." The designer needs these competencies to be alert to "aesthetic wear and tear," which Dorfles suggests as an analogue of "technical wear and tear," and a prelude to obsolescence.341

339 Reyner Banham, quoted in Alberto Rosselli, "Discussione sull'insegnamento del disegno industriale" Stile Industria 21 (Mar 1959), XXI-XXV (XXII).
340 Gillo Dorfles, quoted in Alberto Rosselli, "Discussione sull'insegnamento del disegno industriale," XXIII.
341 Ibid., XXIII. He added, "It seems possible to reach an aesthetic wearing that corresponds—at least in outline—to the normal technical wear and tear of the same object."
Zanuso, in his remarks characterized design for the sake of stimulating production "through suggestive advertising" as a "highly debatable aim" and a misuse of "productive energy." These comments referred to the example of the redesign of American car bodies to lure the consumer to buy new cars, and thereby stimulate production.

I remember having listened some time ago to Henry Dreyfuss giving his opinion on the excessive decoration of American car hoods: the consumer's need to find in his own car a heroic and adventurous symbol of conquest, that in the epoch of the Far West was also identified in the monumental fronts of transcontinental locomotives. This was his opinion.342

Zanuso criticized Banham's advocacy of an "aesthetics of consumability," describing such design problems as part of an "artificial productive system" that had become the norm, although he conceded that it might have to be accepted as part of the economic framework.343

Among these ostensibly varied positions, a pair of presuppositions about architecture, design, and social needs was almost a common denominator. In the debate on pedagogy, Banham had embraced the transience of fashion, and the value of the consumer product. In the debate about the Compasso d'Oro, months later, Argan would refer to the same association in rejecting interior and product

342 Marco Zanuso, quoted in Alberto Rosselli, "Discussione sull'insegnamento del disegno industriale" Stile industria 21 (Mar 1959), XXI-XXV (XXV).

343 "The representational character that the car has for the American consumer has been interpreted and exalted through suggestive advertising with the highly debatable aim of increasing production itself. Highly debatable from the point of view of the orientation of productive energy toward other goods more useful to the consumer and the collective (for example transportation safety)." Ibid.
design. The two did not agree, but they shared the view that architecture was permanent and design was transient, and the architect should determine his attitude toward the design object accordingly. Maldonado and Dorfles, both advocates of industrial design, faulted contemporary designers for their overemphasis on aesthetics and for an incomplete grasp of the current economic and cultural situation. Both alluded to the persistence of the idea that the ideal of industrial design was to bring the object into the purest visual expression of the geometries of the machine, as in the Machine Art of the 1930s. For Maldonado, the corrective was to incorporate scientific research into design; Dorfles, too, endorsed immersing the design student in scientific disciplines.

The first presupposition implied the cultural "depth" in architecture based on its duration in time. The second approach would have grounded the aesthetics of design in science. Both attempted to find an underlying solid ground on which to determine the relevance of architecture or design in relation to society. By contrast, Marco Zanuso did not hold either of these presuppositions. He expressed interest in Banham's idea of an aesthetics of transience, but as noted above, rejected the idea of a profound distinction between industrial design and architecture. Meanwhile, in maintaining that an architect could carry out a version of his disciplinary role, even as part of a specialist production team, Zanuso implied that an architect would not need to be schooled in science to have influence in that sphere.
Already by 1957, Zanuso had cast the industrial designer as part of an interdisciplinary team whose collaborators did not necessarily share art as a lingua franca (as in the classic synthesis) but were put under pressure by the project to arrive at a collective solution that would be intelligible to each, in the terms of his own discipline. A speech he made on the topic of color, at a conference on that theme, illustrates his reflection on this problem. Noting the increased variation of colors in objects, he warned against a rapid or arbitrary change of color and appealed for a routine discussion about color and form, alongside other factors of production, to insure a coordinated result.344

In his caution about color, Zanuso adopted a distinct attitude from that of Gio Ponti, who had advocated the wider application of color, in 1952. Even in 1951, Zanuso had been circumspect toward color, advocating the involvement of painters in architecture.

344 "The bicycle, the sewing machine, the automobile, the typewriter, . . . the telephone, the pencils, were born and for a long time have remained black . . . . In the last few years all these objects, these machines, these utensils, have become colored. In this way our eyes have come to be more frequently and more intensely stimulated chromatically. It is only with difficulty that these chromatic messages are placed in a relationship of harmony and contrast that is not accidental." Marco Zanuso, "Il Colore nell'Industrial Design," INCO Atti Ufficiali del I° e II° congresso nazionale del colore. Padova, June 10, 1957, 214-18.
instead.\textsuperscript{345} Yet Zanuso’s circumspection was not a rejection of the issue but rather, an attempt to recover it from within a collaborative process. In the speech on color cited above, he concluded that practices of coordination, if implemented, could turn production toward beneficial and educative ends.\textsuperscript{346}

Zanuso considered the skills of the architect to be applicable to production for scheduling and coordination. In an essay published in summer 1961 (a year and a half after the debate on the "crisis" in industrial design), he sketched a definition of industrial design as "progettazione integrata" ("integrated" design). Addressing industrialists, he appealed for the incorporation of the designer into the process, via "the creation of permissive conditions at the heart

\textsuperscript{345} See Gio Ponti, "Tutto al mondo deve essere coloratissimo" Edilizia Moderna 48 (1952): 81-82. "Color is held at a distance as that which could disturb an equilibrium that architecture, as yet in its evolutionary phase, can still not control." Marco Zanuso, "Architettura e pittura," Edilizia Moderna 47 (1951): 43-8. "Color is a vital necessity. It is impossible to imagine life without color . . . . It is only in the work dreamed by man that color ends up monotonous and heavy." ("Il colore è una necessità vitale. Non è possibile immaginare la vita senza colore. La natura è tanto più bella quanto più il colore è limpido e intenso. Guardate una mattina mediterranea o un giardino dove i verdi, i gialli, gli azzuri, i viola, i Rossi liberi formano ritmi di festa. Solo nell’opera elucubrata dall’uomo il colore finisce per diventare monotono e pesante.") Mario Ballocco, "Viviamo il colore," A-Z arte d’oggi 2:2 (Feb 1950): 1.

\textsuperscript{346} "It seems to me that . . . faced with the prospect of more intense chromatization of our lives (if you will allow me the ugly expression) we must take care even about already-accounted for experiences, so that these developments may come with more coordination, with more profound awareness, with more care to bring to our eyes, not a chromatic bombardment but a true education in color." Marco Zanuso, "Il Colore nell’Industrial Design," 18. ("Mi pare d’altronde che davanti a una prospettiva di più intensa cromatizzazione della nostra vita (se concedeste questa brutta espressione) ci si debba preoccupare anche per le esperienze già scontate, che questi sviluppi avvengano con maggior coordinazionamento, con più profonda coscienza, con maggior preoccupazione di portare ai nostri occhi, non un bombardamento cromatico, ma una vera educazione del colore.")
of productive organizations," in order to put Italian design on the right path. The title of the essay, "Non è un metodo, è un mestiere" ("it is not a method, it is a profession"), underscored his intention to persuade his audience that design was a profession, not just a technique.347 Zanuso purposefully used the word "progettazione" to describe his concept, instead of the more common term disegnare ("to draw") By using progettare—and programma ("program," in the sense of an order of proceedings)—Zanuso identified design with the scheduling, planning, foresight, anticipation, and coordination that industrial production entails.348 A mass-produced object was "designed" in the sense of progettazione because its production meant bringing the technical and aesthetic aspects into coincidence. Such coordination would have to be done from an informed point of view. Only with a qualified person in the role of industrial designer could one "realize an integrated design," that is, a design that reflects the convergence of aesthetic and other aspects of the project, "the


348 Zanuso, "Non è un metodo, è un mestiere," 15. "The industrial designer is a technician-artist who must know how to coordinate the integrated design [progettazione integrata] of a given product in the sense of being able to achieve and control the formal definition in an aesthetic manner (with all the extension that such a term can have)." Ibid., 16.
specialized competencies that together and in conjunction guarantee that the product will meet the needs of the markets.\textsuperscript{349}

At least two distinct strategies are perceptible in Zanuso’s approach to design for production, circa 1960: the exploratory permutation of the object to determine its value, and the use of an interior plan as an instrument for efficient living. The objective of the first was the discrimination of value in various possible configurations of the object; he exercised a sensibility for the optimal use of technology, particularly as a means to bring the user into contact with information, or the environment of the garden. The goal of the second was to resolve the needs and activities of everyday life into a plan that would subordinate and adapt every kind of object to their pursuit and enjoyment. These were just two of Zanuso’s many resources as an architect and designer, but they shed light on the question raised by his reaction to others in the industrial design discourse. As debate took place in Milan about a "crisis" that signified a general sense of the ethical and aesthetic indeterminacy of industrial design, Zanuso found ways to approach design as determinate problems that could be resolved, both at the scale of the object and the building.

\textsuperscript{349} Zanuso, "Non è un metodo, è un mestiere," 15-16. Zanuso wrote that many projects were produced with some kind of guidance or oversight of the process, but, the intervention of a qualified designer being rare, the result was usually a "bad interpretation," a "vulgar and superficial concept of decoration;" it "copies the forms of a good design realized by others in very different conditions and for different ends;" or it was "... a gratuitous formal characterization of the product, that departs from the nature of the object from the functional point of view, or from the point of view of materials of which it is constituted, or from the technical and technological processes with which it is produced." Ibid.
Design is an experience with a basis in production and this, along with negative aspects, has gathered the positive attributes of a more lively expression of the world in which it develops. Architecture, by contrast, is far from the modes of modern production and from them has not been able to, or known how to, cultivate all those values of content from which one can find its proper way of expression.  

In various contexts, when speaking of industrial design around 1960, Zanuso used the word "expression" to mean the presentation of the mode of production in the object. The example above, in which he uses "expression" to draw a distinction between design and architecture in relation to production, occurred in a piece devoted to "the responsibility of the architect," published in Stile industria in February, 1962. Pointing to architects who, in his opinion, had mastered the terms of production, Zanuso named Mies van der Rohe the ultimate architect "of production"—one who, by "the use of the module, in the joint, in the material," was able to "express this world profoundly." Zanuso added that the work of Louis Kahn, similarly,  

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351 Zanuso, "La responsabilità degli architetti," 25. "Among all, Mies van der Rohe is possibly the only architect of production; the artist who knew how to express this world profoundly; who in the use of the module, in the joint, in the material succeeded in bringing together for the spatial emotion spatial and volumetric architectonics, that 'material of industrial design' that has to do with quality, style... precisely of industrial design." Ibid. ("Fra tutti, Mies van der Rohe forse è l'unico architetto della produzione; l'artista che ha saputo esprimere più profondamente questo mondo; che nella modulazione, nel giunto...")
"succeeds in expressing the content and the motive of a society set before new and no longer reversible themes."\textsuperscript{352}

The Apartment Complex on Via Laveno, a pair of apartment buildings for a private residential cooperative, was completed in the same period. Zanuso collaborated on the project with the engineer Gianni Varlonga, head of the company FEAL (Fonderie Elettriche Alluminio Leghe or "Electric Foundry of Aluminum Alloys"), which had been established in 1945 as a producer of die-cast aluminum parts.\textsuperscript{353}

The buildings were constructed from a building system (VAR-3), with an exterior curtain wall assembly, featuring rectangular panels held in place by vertical muntins, and a framing system of of aluminum, assembled on a rectangular grid.[fig. 3.3] Each panel included the whole of the wall system: stone exterior panel, insulation, and a metal interior surface with an enamel finish.[fig. 3.4] Window shutters and exterior light fixtures were designed by the architect and fitted to this assembly.

\textsuperscript{352} Zanuso, "La responsabilità degli architetti," 25. "Louis Kahn, too, expresses in his architecture the integral motive of functions that is typical of design because it is typical of the modern movement." ("di una società posta davanti a tesi produttive nuove e non più rimandabili. . .")

\textsuperscript{353} Constantino Corsini, Giorgio Wiskemann, "Indagine alla Feal," Stile Industria 28 (Aug 1960): 28. In fact, this was one of three projects, two apartment complexes and an institutional building, designed by Zanuso using a FEAL system. The second, two rectangular buildings on the Via Solaroli, was completed in 1965. Zanuso would also develop for FEAL a design for the Soviet pavilion in a 1966 exposition; the project would be taken over by a Russian architect, but the pavilion is documented on microfilm in Zanuso's archive. FMZ MZ MIC, Fondo Marco Zanuso, Archivio del Moderno, Mendrisio. More research is needed on FEAL, the engineer Varlonga, and the details of this particular collaboration. According to available documentation, Zanuso was approached by Varlonga in 1961 for the Via Laveno project. "Case Feal/1961-1963/Marco Zanuso," http://fondazione.ordinearchitetti.mi.it/index.php/page,Attivita,Itinerari,Scheda/edifici_id,137/itinerari_id,13/show,scheda?SSID=pfuf117b9qb6iefvrrv118kjt4 [Accessed August 26, 2011].
With the mass-produced construction system preeminently displayed, the buildings demonstrated the application of industrial production to domestic architecture, and asserted Zanuso's claim to be an architect who could capture the spirit of mass production in the architecture project. A decade earlier, writing about the work of Jean Prouvé, Zanuso had written that the means to reconcile the world of the architect and "the world of the machine" would be a "new expressive language." In the Apartment Complex on the Via Laveno, and in a second project built from the same system, on the Via Solaroli, Zanuso demonstrated an architecture in which the form was strongly determined by the construction system. In the absence of an ordinary "semantics" of the Milanese residential building, the attributes of the building in use, and the artifacts of manufacture, would have determined the buildings' perceived character.

In comments from around 1960 Zanuso acknowledged that the domain of production was bound up with the world of the consumer. In a speech in November, 1961, he had outlined the advantages of mass production of homes, and argued for the development of the house, analogous to

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354 "The experience and studies of Jean Prouvé suggest to us that prefabrication and industrialization, that is, the contact between the architect and the world of the machine and industrial production, is not so much a technical problem but first and foremost the conquest of a renovated morphology, indispensable complement to a new expressive language." Marco Zanuso, "Un'officina per la prefabbricazione" Casabella-continuità 199 (1953): 38. ("L'esperienza e gli studi di Jean Prouvé ci suggeriscono che prefabbricazione e industrializzazione e, cioè, il contatto dell'architetto con il mondo della macchina e della produzione industriale, non è tanto un problema tecnico ma prima di tutto e soprattutto la conquista di una rinnovata morfologia, indispensabile complemento ad un nuovo linguaggio espressivo.")
the development of industrial design products. Expressing surprise that houses were not yet mass-produced, he considered the problem in terms of supply and demand, and argued that the problem of housing could be addressed in a more accelerated and economic manner by replacing the "artisan" labor of the construction trade with industrial production. If a consumer approached the house as a product, analogous to a cigarette lighter or motorboat, he or she would base the choice on its "technical" qualities. As consumer demand conduced to making housing cheaper and easier to produce, the problem of the inadequate housing supply in Italy would be soluble as a problem of industrial design. The architect might then have a role

355 Marco Zanuso, "Il Piastrella d'oro 1961," Stile industria 36 (Feb 1962): XIII. The event was associated with the award of a prize for the design of ceramic tile, for which Zanuso had been a juror.

356 "The problem of the industrialization of building is not yet mature; it leaves us perplexed even now, and in difficulties, when faced with one of the most basic needs, a product that the masses aspire to but can obtain only with difficulty." Ibid. ("Il problema dell'industrializzazione edile che ancora non ha raggiunto la sua maturazione e che ci lascia tuttora perplessi ed in difficoltà davanti ad uno dei bisogni fondamentali, ad un prodotto cui larghe masse aspirano e al quale ancora con difficoltà si può accedere.")

357 Ibid. "[F]rom the television to the automobile, from the cigarette lighter to beer, from clothing to the motorboat. In these sectors of production, design develops as an element of suggestion in the choice of the product based . . . on the technical qualities and beyond these on the formal and functional qualities." Ibid. ("In questi settori della produzione si sviluppa il design come elemento di suggestione nella scelta del prodotto basata sulle qualità tecniche ed oltre a questa alle sue qualità formali e fuzionali.")
in the development of the house from within the process of production.\(^{358}\)

In certain respects, the Via Laveno buildings were a realization of intentions Zanuso had articulated in his earliest essays on the theme of the house. The siting of the buildings on a generous garden plot embodied the pastoral paradigm that Zanuso had espoused by placing his "ideal house" (1942) in a field at the perimeter of the city.\(^{359}\) The apartments had plans of the genre exhibited in the "technique of living" exhibition of 1936; they can be interpreted as demonstrations of the concept of a multifamily housing built of a light aluminum structure, which had been anticipated in the work of Carlo Biaggi, in *Domus* in the early 1940s.\(^{360}\)

Moreover, the VAR-3 construction assembly adhered to the criteria for prefabricated architecture which Zanuso had outlined in a series

\(^{358}\) Zanuso, "Il Piastrella d’oro 1961," XIII. The question of what research was conducted on such a solution in Italy during the 1960s, and what its findings were, is a subject that begs further research. A study of prefabricated architecture focused on FEAL ["Indagine alla Feal," published in *Stile industria* 28 (Aug 1960)] explored technical aspects of the problem, such as the problem of a universal dimensional standard. An analysis of the problem in the case of Great Britain, which appeared a few years later, concluded that the mass production of housing was constrained by an economic framework in which the cost of architecture was linked to the high cost of land. See Alexander Pike, "Failure of Industrialised Building/Housing Program" *Architectural Design* 37 (1967): 507-509.

\(^{359}\) Marco Zanuso, "Casa ideale" *Domus* 176 (1942): 328-30.

\(^{360}\) The Via Laveno concept resembles a building drawn by Biaggi, a modernist prodigy who had won recognition in the Littorial prize competition of 1938 while he was a first-year student, later a collaborator in the Milano Verde plan developed by Giuseppe Pagano. Carlo Biaggi, "Possibilità dell’aluminio nell’arredamento della casa popolare," *Domus* 197 (1944): 180-183. On Pagano's "technique of living," and Zanuso's "ideal house," see Chapter 1.
of articles in 1946, co-authored with Paolo Chessa. One trait that exemplified Zanuso’s early ideas was the palette of materials, primarily aluminum and stone. These could be prepared by “dry” methods, such as cutting and mechanical connection, insuring that construction on a large scale could begin as needed and finish quickly, irrespective of humidity or other uncontrollable conditions that might impede production. A second aspect of the project was the application of “industrial” logics to the construction site. Zanuso and Chessa had advocated relocating all fabrication to the factory, where the work could be regulated according to the efficiency and precision of industrial manufacture, creating more comfortable

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361 In their three articles in *Domus la casa dell'uomo*, Zanuso and Chessa had advocated the use of the module, the choice of specific materials, and the organization of the construction site.

362 Cutting, folding, stamping, and other simple, dry manipulations were Zanuso and Chessa’s ideal; no glue or liquid-to-solid phase change should be involved; brick and mortar construction was excluded. Marco Zanuso, Paolo Chessa, "La casa prefabbricata 2: i materiali" *Domus la casa dell'uomo* 206 (Feb 1946): 31-33.
conditions of labor, and culminating in a construction process that was essentially "assembly."  

A third feature of the Via Laveno buildings that recalls Zanuso and Chessa's criteria was the module. Zanuso seems to have noticed that the roughly one-meter spacing of vertical elements gave the VAR-3 system an inherent variability, for he took advantage of this property to provide an architectural configuration that was unlike the normal masonry building. The same dimension was meaningful in the interior plan, where it formed a grid on which to place the sofa, chairs and tables, functional kitchen, and other elements of the interior. (A plan drawing shows the aluminum supports in the curtain wall, and the location of furniture in the grid they indicate.)[fig. 3.4]

The distinctive appearance of the Via Laveno buildings, in which a curtain wall was visibly displayed and played a determinate role in the design, indicates that Zanuso responded to the contingencies of

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363 Marco Zanuso, Paolo Chessa "La casa prefabbricata: il cantiere," Domus la casa dell'uomo 207 (Mar 1946): 17. They observe that the contemporary site is a demountable workshop that moves around and takes on different aspects. Stages of construction done by machine are interleaved with artisanal methods. The workshop "disappears" only to "reappear" in a slightly different form. Instead, as part of the industrialization of building, pieces should be delivered on site ready for assembly. "The machine must be removed from the construction site, must be brought into the factory so that what emerges is the element ready for assembly, which will not need a moving workshop but an organization of transport and assembly, as in the case other industrial products, such as the automobile, the airplane, the ship." Ibid. ("La macchina deve essere tolta al cantiere, deve essere portata nella fabbrica così che da questa esca l'elemento da montare già finito per il quale non sia più necessaria l'officina ambulante ma un'organizzazione di trasporto e di montaggio come per qualsiasi altro prodotto industriale, quale l'automobile, l'aeroplano, il bastimento.")

the industrially-produced envelope by embracing the details of the building assembly as visual motifs in the project. Two contemporary reviewers of the building praised it for the clarity or purity of its design. Pier Carlo Santini, who reviewed the project for Ottagono, in 1966, wrote that Zanuso had "reproposed the theme of the house for man in a version that is immune to any formal abstraction."\textsuperscript{365} Fabrizio Oliva, who reviewed the building that same year, in L'architettura cronache e storia, emphasized the architect's astuteness, the building's technical sophistication, and the "logical" derivation of the building "image" from its construction.\textsuperscript{366}

Implicitly, these critics may have had in mind the absence of strategies of the "neorealist" architecture projects that had been described and debated in Italy during the 1950s, such as systems of decoration, or an iconography that might have appealed to colloquial symbols of an "home." They might have been especially appreciative of the frank pragmatism in the exposure of the building system, which recalled the modernist ideal of "honesty" in architectonic expression, after the critique of "Neoliberty" in Milanese architecture, as a

\textsuperscript{365} ("Egli ha infatti qui riproposto il tema della casa per l'uomo in una versione immune da ogni astrazione formale.") Pier Carlo Santini, "Marco Zanuso una casa a Milano," 79.

\textsuperscript{366} Fabrizio Oliva, "Due edifici gemelli d'abitazione a Milano" Architettura cronache e storia 11:123 (1966): 566-571.
"retreat" from the Modern, by Reyner Banham, and the defensive response by Ernesto Nathan Rogers, in 1959.\textsuperscript{367}

From another point of view, several details in the building that were artifacts of this particular system give the buildings a distinctive and unsettling appearance. The curtain-walled volumes, on their masonry bases, decrease in floor area toward the upper stories; but while the pyramidal shape of their volumes gives an impression of heaviness, the glass walls around the lobby enclosures at ground level give the assembly an appearance of floating, from certain vantage points. At the level of detailing, the exposure of the narrow aluminum mullions that hold the stone panels gives the impression of a lighter material restraining a denser, heavier one. The notches in the upper edge of the curtain wall, and the placement of the building assembly on a masonry wall and plinth at ground level, evidently correspond to the demands of the materials. Stone and aluminum, which had been

chosen from the point of view of production, were now subject to static forces and atmospheric conditions. Left as they were, visible, these artifacts of the system, in this particular application, gave the building an ambiguous appearance, especially in view of the masonry architecture that was normal in Milan. At the level of these moments in the design, its clarity is the quality of a system that refers to itself. In this regard, the frank display of the method of construction suggests an analogy between these buildings and machine made objects like sewing machines, cars, and other objects of industrial design whose shapes were tied to their production and function.

Zanuso's analogy between the house and industrial design product, cited above, supports the latter interpretation of the building, in which the architect presented the housing unit as a product by emphasizing its function or use. On this reading, the architect allowed the façades and volumetric characteristics of the building to convey an appearance of uniqueness, but at the same time, he developed its "performance" aspects. The economies of the building's production, and the technical precision of its construction, would be applied in such a way as to be meaningful in the use and experience of the home, and the building's unique appearance could be understood as a symbol of these attributes.

The characterization of the building, in this sense, can be most precisely grasped by its comparison to a second example, the Apartment complex on the Via Solaroli (1965), a project designed slightly later
than the Via Laveno, in which Zanuso used the same VAR-3 construction system. The Via Solaroli complex, like the one on the Via Laveno, was a pair of nearly identical mid-rise apartment buildings, each with a core of circulation and utilities providing stair and elevator access to each level, with the remaining building volume comprised of a light-framed structure and curtain wall. In the Via Solaroli project, the curtain-wall system was assembled with stone facing on the outer surface of the wall section, and presented a smooth rectangular block faced in stone, the muntins showing only at the buildings' corners and between the windows.[fig. 3.5] The porches were inset in these volumes.

The Via Laveno and Via Solaroli projects present two approaches to the characterization of the home as an industrial product. In the site plan of the Via Solaroli project, the paths of entry and exit were more elaborate. The buildings were set in a garden space landscaped with trees, grass, and stone paths, with a patio between them, as they were on the Via Laveno. But whereas the Via Laveno complex was surrounded by on-street parking, the Via Solaroli project had an additional path of arrival by car and entry through the garage, served by elevators, giving the street-level plot of the complex less emphasis as an entry sequence and more as a garden.

The modular design allowed for flexibility in planning, but the determinant of interior space in these projects seems to be the size of the rooms, and position of balconies. The Via Laveno project had a balcony adjacent to almost every room. These balconies contributed to
the building's irregular appearance, but they were open to the sky. The apartments and rooms on the Via Laveno were larger, arranged in a sequence, and had their doors offset, inviting diagonal movement across rooms, and between doors and balconies. By contrast, in the buildings on the Via Solaroli, the balconies were inset in the building and shaded; the apartment plans were compact and rectangular, just like the overall volume; and the plans were tree-like: a vestibule near the apartment entrance opened onto a bedroom, living room, or kitchen.

The Via Solaroli seems to be the more fully resolved project at first glance, as if on the second try, Zanuso conquered the contingency of the system by subordinating the volume to a stable geometric form. The Via Solaroli also recalls certain images of modern architecture, such as the rectilinear white buildings of Italian Rationalism or the close connection of apartment house and garden in Le Corbusier's city proposals, circa 1930. Key features of these buildings by Zanuso are the garage and garden of the Via Solaroli, and the ample plans and terraces of the Via Laveno. Both are instances in which the inbuilt flexibility of the system is consummated relative to a specific aspect of use.

In the Apartment Complex on the Via Laveno, the technical capabilities were developed in order to highlight the capabilities of the technical assembly from the point of view of use. At the same time, with its many balconies, the building emphasizes the connection to the outdoors and movement between indoors and outdoors. The
movement across rooms is figured in the apartment plans and in the plan of the whole, as well as in the building's volumetric character and the breaks in the curtain wall. In this way, the apartment building was presented as a utilitarian object. Its unusual appearance was linked to its performance, and could become a symbol of its functionality.

Zanuso approached the design of the Doney television, with Richard Sapper (who had joined the Zanuso office in 1958) in an analogous way. The Doney, a design produced by Brionvega starting in 1962, was the first miniaturized television to be built in Europe. Zanuso and Sapper had analyzed the assembly and the requirements of the parts in order to explore the permutation of possible forms afforded by the components, then set out to constrain the television body to the dimensions of the screen. The result of their choice was a television such that, viewed from the front, it had no frame around the screen, only a transparent plastic cover, attached to the case, to protect the tube and hold it in place. The wire pedestal of Doney tilted the screen upward, which gave the unit an animated appearance and afforded viewing by the passenger in an automobile.[fig 3.6] Through the design, the architect and designer created an unusual

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368 Richard Sapper (1932-) was born and educated in Munich. After beginning work as a designer in Germany, he moved to Milan in the late 1950s and joined Zanuso’s studio, where he remained as Zanuso’s principal collaborator on design projects until he started his own practice, in 1977.

appearance on purpose, which in turn became a symbol of the properties of the television in use.

This particular comparison underscores the significance of the Via Laveno project. Unlike its sibling on the Via Solaroli, the Via Laveno project had a form that could not be reduced to any single precedent or reference. It was therefore all the more suited to become meaningful through use. In addition, the comparison casts the house as a media receptacle analogous to the television. A house and a television are, of course, completely different kinds of object. But the prominence of new forms of technique and technology in these projects lent itself, in each case, to the bringing new connotations of use and meaning to its type.

**Information Economy and Consumer Culture**

From the early 1950s onward, Zanuso kept clippings of newspaper articles in which he was named. A selection of articles from this file illuminates the representation of his practice in the press. By following the mention of Zanuso's name, one can begin to appreciate the way an architect-designer was handled in the press, and how his

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370 Eco della Stampa file. [FMZ MZ ECO, Fondo Marco Zanuso, Archivio del Moderno, Mendrisio.] The "Eco della Stampa" was a service that delivered sheaves of clipped-out articles, with his name underlined in grease pencil, tagged with a slip of paper noting the publication name and date. "Eco della Stampa" ("echo of the press") founded in Rome in 1901, remains in operation under the direction of the founding family. "L'Eco della stampa" http://www.ecostampa.it/it/eco-della-stampa-un-successo-lungo-100-anni.asp [Accessed Sept. 13, 2010.]
agenda was refracted through the information media through the routines of publicity that took shape around architecture and design culture, and the aesthetic sensibilities that governed its reporting.

Predictably, the file includes a substantial number of mentions of Zanuso's name in architecture journals, such as Domus, Casabella-continuità, and Zodiac; interior design journals such as Interni and Abitare; and the design journal Ottagono, focusing on architecture and design from the architect and designer's perspective (begun in 1960). Zanuso's work was also featured in other trade journals, such as Marmo Tecnica Architettura, which ran a profile of Andrea Cascella and his marble sculpture for Zanuso's Factory for Olivetti in Argentina. The survey of contemporary architecture by a critic with specific interests, writing in a trade journal, was a perennial genre. Examples from the early 1960s include Pier Carlo Santini's survey of industrial architecture; Roberto Guiducci's articles on the problems of school and factory architecture in Rivista Pirelli, a journal of culture

371 "Una scultura di Andrea Cascella" Marmo Tecnica Architettura (Feb 1964). Most journals of this type, in Zanuso's file, were based in Milan. Among others in the file were L'Industria del Legno (on the wood industry), Materie plastiche ed elastomeri, and L'Industria Italiana dei Plastici (on plastic and "elastomeric" materials). An exception is the Bollettino Dei Brevetti per Invenzioni Modelli e Marchi Ministero dell'Industria e del Commercio, devoted to patents (for "inventions, models, and trademarks"), which was based in Rome.[FMZ MZ ECO 001 Fondo Marco Zanuso. FMZAMM.]
produced by the rubber company; and the critic Filiberto Menna's articles for the newspaper *Il Globo*.  

The representation of publications not focused on architecture, in the clippings collection, indicates a wider field of publicity, including an information network of at least 67 publications across Italy. Many clippings are from regional newspapers, articles of often just a few lines but sometimes several columns long. These newspapers were from cities near Milan, such as Varese, Bergamo and Pavia; cities to the east, such as Brescia, Trieste and Udine; and remote regional centers such as Palermo, Cagliari, Catania, and Bari; as well as major cities such as Naples (2 publications), Turin (3), Florence, Genoa (3), Venice (2), and Rome (9). Due to syndication, many of these publications were duplicates of articles that had first appeared in Milan (in that city, Zanuso was mentioned in 33 different publications, in 1964).

Inspection of a single *Eco della Stampa* clipping reveals advertisements on the back of the attached tags. The newspaper and magazine companies that described the project, interviewed the architect, discussed architecture, and in other ways fed public curiosity, would earn income from advertising. Syndication

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372 Pier Carlo Santini "L'architettura industriale" L'illustrazione del medico (Oct 1963); Filiberto Menna, "Caratteri originali del 'design' scandinavo." *Il Globo* 30 June, 1963. A copy of Guiducci's article, placed in the Eco file, was given to Zanuso by Guiducci himself with a note attached: "You will find citations of the three factories in Italy. . ." Roberto Guiducci "Fabbriche nel Sud" Rivista Pirelli (Jun 1964). ("Troverai citazione delle tre fabbriche in Italia - Molto Cordialmente tuo Roberto.")

373 The observations in this paragraph are based on a survey of a single year, 1964. FMZ MZ ECO 001 Fondo Marco Zanuso. FMZAMM.
would multiply transactions per item and cover more or fewer nodes in the network. As an architect's importance grew, his name would saturate the network and the press service could sell more instances of his name, to the architect and, perhaps more significantly, to its own advertisers. The advertisement on the clipping demonstrates that Eco Della Stampa not only sold the clipping service but also made money on each exchange of information. Thus, the achievements that built the architect's reputation were made public in a speculative economy of information.

The number of clippings in Zanuso's press file sharply increased after 1962, when his "Doney" television (designed for Brionvega with Richard Sapper) won the Compasso d'Oro prize. This suggests that the Compasso d'Oro, and by extension the design calendar made up of the Triennale, Fiera Campionaria, and other periodic exhibitions, seasonally served to recharge the design-information economy. The prestige of the architect's name could be inflated by each iteration of the cycle. Zanuso's name appeared in advertisements for Arflex, along with the names of its other architects and designers. His "Fourline" chair for Arflex was included in a 1970 show of furniture at Monza, which featured a section of chairs with "signatures."[fig. 3.8] He was interviewed; and he also appears in a type of article in

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374 The role of syndication is reflected in the very name, "eco" ("echo"); variations printed on the tag are "L'Argo della stampa" (1912) and "L'informatore della stampa" (1947), titles referring to the "issue" and the "informer" of the press.

375 Zanuso's file for 1964 contains approximately 122 clippings. A comparable volume of clippings per year persisted well into the 1970s. FMZ MZ ECO 001 Fondo Marco Zanuso, Archivio del Moderno, Mendrisio.
popular publications, which considered groups of architects and designers, noting the prizes and achievements of each, including portraits.\footnote{376 "Il Catino con la firma" L'Europeo 12 November 1964; "Se ne parla" [publication name unavailable] 1972 article; Marco Fini, "Si consolano firmando gli oggetti" Tempo 16 January, 1971. [FMZ MZ ECO] Fondo Marco Zanuso. FMZAMM.}

The culture of publication and publicity emerged as a source for the consumer providing information of interest to the evaluation of products and designers. The epistemic frame for the press, by which the names and works of architects and designers were presented to the reader, included prizes, such as the Compasso d'Oro and other examples based on a region or category; and associations in which designers were members, such as the ADI, the Milan-based Associazione per il Disegno Industriale ("Association of Industrial Designers"). La Rinascente, the department store, played a role as a showcase for new products, and, as a sponsor of the Compasso d'Oro, a promoter of new designs. The ultimate cue of value, during this period, was news of a design's recognition by the Museum of Modern Art in New York, or other contacts between the architect and overseas institutions.

Articles from the popular press, in the Eco della Stampa file, demonstrate a way of presenting the object that was distinctly different from the way Zanuso and other architects regarded the architectural work and design object. The magazine editorial tended to isolate the piece, to emphasize certain characteristics. A selection of clippings demonstrates that in the press, the individual object was
often not portrayed as an implement put in place for its role or function, but instead presented in some other organizational frame that had nothing to do with the object as a means to an end, and in some cases emphasized an alternative to a plan such as short-term gratification, or collection on an arbitrary principle.

In some examples, the problem of interior plan was alluded to but something else was presented to distract the viewer from what was being shown: a metaphor, the furniture "notebook," or "tree of [gift] ideas" organizes a set of objects [fig. 3.10]. "Safe" colors is the theme of a spread in shades of beige [fig. 3.11]. In each of these, the organizing framework is a common trait or rhetorical device (color, metaphor) that makes the selection cohere on the page and in the viewer's mind. An article featuring an array of white designer chairs, distinguished by their features but together forming a sea of monochrome, is a key example of this type, for the way it takes advantage of subtle differences between the objects to create a cohesive image with minimal content.[fig. 3.12] The assembly according to the color, analogous to the "notebook" or "tree" in the examples above, highlights just this superficial characteristic, taking no interest in their different instrumentalities as means to an end or as elements of a fixed set of circumstances of life. Detached from any conception of a specific spatial plan, the objects are freed from any reference outside of themselves, or any burden of meaning or stakes apart from what might be presented in the article.
While Zanuso was developing an aesthetics for the industrial object and building, his achievements were broadcast to the public in an information economy that thrived on novelty, whose basic concept was not a setup for a life but a selection of props for a way of living: a lifestyle, not a fixed setting for living that would change in the interest of goals but an open framework that could change indefinitely, toward any number of ends.

Women comprised a segment of the reading public that could well appreciate the idea of a new emphasis on efficiency in living, and on the precision and performance of objects in use. Before 1960, Zanuso had established himself as a designer for women and children with the girls' residence "Le Carline" in Milan and the Asilo [nursery school] at Gubbio, including interior schemes and furnishings, both completed by 1959. Zanuso's office would also design the kindergarten for the Factory for Olivetti in Argentina. Cini Boeri, an associate in his office from 1956-1965, raised four sons while working on these and other projects. Several of Zanuso's appearances in the print media (some of which credit Cini Boeri as well, analogous to Zanuso's convention of giving equal billing to Richard Sapper for their product


378 Cini Boeri, who formed her own office in 1965, would continue to work as a furniture designer; her own "Bobo" (1967) and "Serpentone" (1971) are similar to the Tripolitrona and Lombrico designs from the Zanuso office and also produced by Arflex. As one of few women architects of her time Boeri (along with Gae Aulenti, and others) has been considered in the work of feminist design historian Catharine Rossi. See "Furniture, Feminism, and the Feminine: Women Designers in Post-War Italy, 1945-1970," Journal of Design History 22:3 (2009): 243-257.
designs) suggest his prominence as a key point of reference in articles about design and architecture in publications for women. If the house was the site where aesthetics, economy, hygiene, and other factors converged, as it had been described by Giuseppe Pagano in 1936; this remained the case in the postwar period when the housewife was the preeminent user, occupant, client, and subject of the postwar modern home.379

A document of the press directed toward women (the "Stampa femminile") is an essay by Marco Zanuso's wife, Billa Zanuso, a writer

379 Pagano had written, "The problem of the furnishing of the house is a particular theme of architecture where very diverse concepts are encountered, are crossed, are sometimes grounded, but often also are in conflict. Aesthetic problems versus economic exigencies, hygienic and social ideals against urban difficulties, practical needs of well-being and rest versus romantic habits of other times, subtle feelings of unease, rebellion, autonomy contrast with sentimental resignations to old means, old systems..." Giuseppe Pagano, *Tecnica dell’abitazione* (Milan: Hoepli, 1936), 9. ("Il problema dell’arredamento della casa è un tema particolare di architettura dove si incontrano, si incrociano, talvolta si fondono ma spesso anche si contrastano concetti molto diversi. Problemi estetici contro esigenze economiche, idealtà igieniche e sociali contro difficoltà urbanistiche, bisogni pratici di benessere e di riposo contro romantiche abitudini di altri tempi, sottili sentimenti di disagio, di ribellione, di autonomia contrastati da sentimentali rassegnazioni a vecchie supplielettili, a vecchie sistemi.")
for television and film and theater personality in postwar Milan.380 In a vignette from her volume of short essays based on observations of the borghese class in Milan, published in 1962, she distinguished two kinds of articles through which women were addressed in the press: the "technical," and "psychological." The first—concerned with beauty, fashion, cuisine, and housekeeping—was useful. The second, preoccupied with etiquette, personal narrative, morality, comportment, information, and customs, emphasized the traditional roles of the wife and mother, offering advice on how to achieve a comfortable situation through relationships with men.381

380 Billa Zanuso had begun her writing career as a member of the "Casa Latis," an amateur theater troupe featuring marionettes, and had gone on to perform and write after the War, often with the actress Franca Valeri; the two had been classmates at Liceo Parini. The marionettes were designed by Marta Latis, and the architects Vito, Mario, and Gustavo Latis were part of the troupe.[Susan Young, "I Fratelli Latis—Milan," in Shakespeare Manipulated: the Use of the Dramatic Works of Shakespeare in Teatro di Figura in Italy (Madison, New Jersey: Farleigh Dickinson University Press, 1996), 53-59. See also, Riccardo Barletta, "Antiche marionette da salotto" Corriere della Sera, 16 March 1993, p. 43. Online Historic Archive, http://archiviistorico.corriere.it/1993/marzo/16/antiche_marionette_salotto_co_0_93031617660.shtml, [Accessed Jan. 11, 2011.] During the postwar years, Billa Zanuso, with Franca Valeri, performed regularly in a radio cabaret as a character named "Billa Billa." "Teatro al Femminile; Dispensa del corso di Teatro e Spettacolo anno accademico 2008-2009." Edited by Emilio Pozzi (Milan, Urbino: Università degli Studi di Urbino Carlo Bo, Facoltà di Sociologia, Istituto di comunicazione e spettacolo), 57-61 (60). http://www.uniurb.it/sociologia/images/Downloads/SCICOM/documenti/teatro_al_femminile.pdf) [Accessed Jan. 11, 2011.] Billa Zanuso was also a screenwriter for the 1963 film "Ieri, Oggi, Domani," ("Yesterday, Today, Tomorrow") directed by Vittorio De Sica. Her contribution, adapted from a story by Alberto Moravia, was to the tale of Anna, the disaffected wife of a furniture mogul. Billa Zanuso also wrote for television, and her study of the origins of psychoanalysis, published in 1982 by Bompiani, is widely cited in bibliographies on that theme. Billa Zanuso, La nascita di psicoanalisi: Freud nella cultura Vienna fine secolo (Milan: Bompiani, 1982).

Marco Zanuso’s designs, and sometimes his opinions, appeared in many articles of the "technical" kind, which addressed women as heads of household, responsible for managing the home and even household finances. An elaborate discourse related design products to many areas of life, with an emphasis on etiquette and responsibility—maintaining an attractive physical condition, accounting, sewing fashionable clothes, and instructing a tailor, as well as the selection of furniture, interior design, and architecture. Visual characteristics were emphasized in objects at every scale, from the body to the fork or spoon; in cars, clothing, rooms, flatware, and linens. For the consumer, as for the investor, the designer and his signature were presented as guarantees of the right lineaments, whatever the objects. Women were also addressed as mothers, presented with designs for furniture for children. [fig. 3.13] They were invited and instructed to use new tools for living, such as the kitchen scale. [fig. 3.14] An article about the attendance of women at a furniture show suggests that for some analysts, the fate of an entire industry was considered to depend on the susceptibilities or interests of women. 382 Men, too, were addressed by the press, as magazines offering advice on what to wear and what to own, including tools of personal use for health or grooming. An article in Panorama Uomo, for example, juxtaposed a

382 “Fanno la coda per la lezione di cucina le giovani signore al Salone. . .”. The occasion was an exhibition of housewares, attended by 70,000 spectators in its first two days. [Title unavailable] Gazzetta del Popolo (Turin), March 20, 1964.
television and cable radio designed by Marco Zanuso and Richard Sapper, with men in sunglasses and smart knitwear. [fig. 3.15]

**The Interior as an Image of a Way of Life**

Marco Zanuso's approach to the interior plan was a salient trait in his work. Along with the design strategy described above in relation to the Apartments on the Via Laveno, interior planning was a second significant resource that Zanuso had developed in relation to the problem of industrial design, by 1960. His designs during the 1960s show that he responded to the demand for flexibility in living space that was also the theme of many articles in the industrial design-related press. An example in this vein was "Tripoltrona," three interlocking cushioned seating pieces that could be configured in various ways, and was a print media favorite. The divan is "born again every day," one headline announced. In another editorial spread on this system, the sofa is casually strewn with vinyl record albums, conveying an atmosphere of relaxation while, nearby, a man exchanges smiles with three women. [fig. 3.16] Zanuso's Lombrico ("worm"), for C&B Italia (1967), was another piece in this vein: a sofa of indefinite length, made of an upholstered upper part on a base of bent sheet-metal.

However, whereas the tendency in the press was to flatten the field of objects, to simplify the differences between them and lower the stakes of consumer decisions, Zanuso's approach to the plan
entailed a methodical survey of the properties of objects, in order to place them in the most productive arrangement, relative to the user. The apartment Zanuso designed for himself and his wife and daughters, in Milan, demonstrates how he applied this sensibility in the planned domestic interior. By examining this plan, as seen through the observations of Eugenio Gentili, one can see how Zanuso’s method of planning was an exercise in which acts of organization were deliberately connected to specific objectives of the inhabitants.383

The project involved structural alterations to an attic and the selection and distribution of furniture, including examples of his own work such as the Martingala and Lambda chair, and built-in cabinets, along with several antique family heirlooms. His approach entailed devising a plan of uses of the space, then completing the plan by weighing each furniture piece to assess its best contribution to the whole, bearing in mind the interconnection of these decisions. In this way, the distribution of furniture was subordinated to the functional planning of the apartment. The design was a squaring up and augmenting of "givens" to meet the way the family intended to live, however it might reorganize conventional, even antique pieces, in the interest of new priorities, reflecting that conviction of the preeminence of

performance and quality as contemporary cultural values, which Zanuso hints at in various of his writings.\textsuperscript{384}

Implying that anyone could achieve an analogous plan by Zanuso's procedure. Gentili led his reader through the steps of planning. A first precondition of the process is what Gentili called "maieutica" ("maeiotics"): in effect, self-knowledge.

Even living is, at some level, a choice: through an effort of clearness one comes to establish how one would really like to live within those cubic meters that we are assured, and to establish it in absolute liberty from whatever preconceived scheme, from whatever conformist idea compared to what we see others do.\textsuperscript{385}

One must make a list of the objects at his disposal and identify their useful aspects. In this way, pieces of any vintage would be redefined in terms of utility, relative to the current situation.\textsuperscript{386} Although antique furniture pieces had been designed for patterns of living that might no longer exist, the use of each piece in Zanuso's apartment was opportunistic and inherently indifferent to an object's

\textsuperscript{384} For example, in "La responsabilità degli architetti," in which Zanuso writes of "that 'material of industrial design' that has to do with quality, performance" ("la prestazione") "La responsabilità degli architetti" Stile industria 36 (1962): 25. Often, however, the conviction is implicit, as in Zanuso's comments on the "false antiquariat," discussed below.

\textsuperscript{385} Eugenio Gentili, "Marco Zanuso: la nuova sistemazione del suo alloggio a Milano," 12. "Waiting for such a situation to be achieved, the architect called to furnish a residence will have to make appeal to [maieutica] to guide his clients to discover themselves, and to enable him in this way to objectively organize the space that is proposed; the unique exception being the cases in which the client has precise knowledge of what happens to him, or when the architect must realize a home for himself." Ibid. Note: Gentili is sometimes credited as "Eugenio Gentili Tedeschi."

\textsuperscript{386} "In this way one would come to verify the level of 'utility' that an antique furniture piece preserves in comparison to the needs of today, and to value when it should be opportune or at least make use of it to respond to problems of a purely practical character." Ibid., 14.
age or formal style, reflecting only its performative capability in relation to present habits.

The modes in which the different functions come to be executed (sitting, going to bed, reading, studying, getting together for conversation, etc.) are continually changing, and from time to time one will use the furniture that best responds to the need. A furniture piece, independently of its state of conservation and its aesthetic merit, will more or less retain a capacity to fulfill the scope of use for which it was constructed.  

The utility of the object would to be judged "in comparison to the needs of today," bearing in mind how the chosen uses of the pieces might bear on one another. Meanwhile, the evaluation must not neglect the aesthetic aspect. "One will put in the balance criteria of different orders, cultural or sentimental or of taste, to partake of them continually according to our aptitudes or needs."  

By the use of this kind of method, Zanuso deliberately ignored the connotations of an object in order to take into account only their usefulness for a specific purpose. The ruling "optimum" was not

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387 Gentili, "Marco Zanuso: la nuova sistemazione del suo alloggio a Milano," 12-14. Citing examples, Gentili observed that shallow cabinets had replaced armoires, and changes in clothing allowed different kinds of chair. "The habit of using light, frequently changed linen has created the opportunity to have numerous shallow cabinets, in contrast to the two or three large cabinets of long ago. Meanwhile the abolition of cumbersome female dresses has made habitual a position of sitting that is no longer stiff but loosened, and so the seats are lower and dimensioned for different physiological positions." Ibid., 14.

388 "Houses of this type entail an extremely careful selection, because the individual problems do not presuppose univocal solutions but require above all a coordination and an intimate coherence between solutions that can also appear formally heterogeneous." Ibid., 12.

389 Ibid., 14. Further, Gentili notes, Zanuso has attended well to "the encounters among the materials and among the colors." ("[A]nche qui è posto in risalto, inoltre alla qualità, il valore di uso dei singoli elementi, tutt'al più cercando di far vibrare in maniera più preziosa gli incontri tra le materie e tra i loro colori.")
absolute but contingent, strictly relative to the patterns of activity. Since consideration was given to style as such, the unity of the whole would not be elaborated in terms of a superficial resemblance of things to each other. The moment of contemporaneity would be perceptible in the apparent high standards to which all the things had been subjected, and in the experience of comfort in using the rooms.390

Zanuso's apartment, with its antiques and exposed timbers, bears little resemblance to the sleek interiors that had been displayed at the VI Triennale in 1936, illustrating Giuseppe Pagano's conception of the "technique of living." But his focus on the envisioning of a life by means of a plan, and his strict application of the criterion of "performance," are reminiscent of Pagano's writings on the relationship of the home to its time. "The level of aesthetic sensibility of the individual, and the technical capacity of a culture [civiltà], are easily legible in a dwelling, more than in an official document," Pagano wrote in the exhibition catalog.391

Pagano had stressed the need to convince the public that the relationship of coerenza ("coherency") "between the spiritual world of

390 "The precision with which the dwelling is structured is based only on the qualification of the various parts: the mode of living is already completely defined, almost nothing remains but the placement of the individual objects in the boxes predisposed to contain them and the satisfaction of the indicated functions is indifferent to the character of the objects employed at one or another place." Gentili, "Marco Zanuso: la nuova sistemazione del suo alloggio a Milano," 12.

391 "Il grado di sensibilità estetica dell'individuo e la capacità tecnica di una civiltà sono facilmente leggibili in un alloggio, assai meglio che in un documento ufficiale." Pagano, Tecnica dell'abitazione, 9.
an epoch and its architectonic manifestations" is not something new but a rapport that can be seen at moments throughout the entire history of man. He added that architectonic culture [civiltà] "expresses this spiritual atmosphere and to have a living expression a coherency between the works of the arts and what we call culture is necessary. . ."392 His aim had been to bring spiritual desires, including the yearning for simplicity and efficiency, into coincidence with the spaces of living. "If man can be compared to a lens, the world of the spirit of the object and the architectonic manifestations of the image, we would say that the state of coerenza is when man 'brings into focus' the [architectonic] image."393

By providing a framework in which each element in the diverse collection could be given a determinate place, Zanuso's plan served the goal of assimilation and a similar criterion of coherency at the scale of the apartment. The functional plan, at the scale of the interior, played the role of a "figure" that served to "organize" the objects. An aspect of Zanuso's approach to the design of mass-produced

392 Pagano, Tecnica dell'abitazione, 9. ("È necessario che il pubblico sia persuaso che questo rapporto di coerenza tra il mondo spirituale di un'epoca e le sue manifestazioni architettoniche non sono invenzioni recenti ma fattori facilmente constabili nella storia della civiltà e della architettura. . .")

393 Ibid., 9-10. ("La sua civiltà architettonica esprime questo ambiente spirituale e per avere espressione viva è necessario che tra architettura e civiltà di un'epoca, tra mondo plastico delle arti e quello che noi definiamo civiltà vi sia un rapporto di coerenza; non può cioè corrispondere a una architettura creata per una determinata civiltà un mondo spirituale diverso da quella stessa civiltà, senza creare uno stato di incoerenza, cioè di negazione artistica [. . . .] Se paragoniamo l'uomo a una lente, il mondo dello spirito all'oggetto e le manifestazioni architettoniche all'immagine, diremo che stato di coerenza vi è quando l'uomo 'mette a fuoco' l'immagine.")
furniture pieces corresponded to this conception of the plan: the object was also supposed to have a strong form of its own. The aims of this approach are demonstrated in the Lambda chair (1959-1960), which was designed for Dino Gavina, as Gavina embarked on the production of furniture as a new direction for his sheet-metal fabricating company. 394

In a description of this project, from a 1965 lecture to a European congress on industrial production, Zanuso described having set the goal of the design in terms of chair seat and back, two planes to be somehow supported and connected, assuming the general recognizability of a chair meeting these specifications as "belonging to the current type." 395 Sheet metal came into consideration during the design process, in response to the fraying edge of the chair seat and back surfaces. The designers noticed this condition in various points of the project, and the metal, which could sustain the transition between the plane of the seat and the line of the edge, which were initially regarded as different materials, perhaps, took on an increasing role, until the entire chair was made in welded bent sheet metal.

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395 Marco Zanuso, "Relazione sul tema 'L'importanza dell'industrial design nella fabbricazione di beni di consumo.'" For the conference organized by the C.E.C.A (Lussemburgo 26/29 ottobre 1965) [FMZ MZ SCR] Fondo Marco Zanuso. FMZAMM.
metal. For reinforcement, an extra layer was added to the lower back, and to the transition between seat and leg.[fig. 3.17]

Summarizing the process, Zanuso described the use of drawings, and offered the project as a case study in what could be a broader "organized and systematic" investigation by producers and designers, to map the possibilities of the production of goods, in the interest of a more rationalized production system."³⁹⁷

The effectiveness of the result—due in part to the simplicity of the chair made of a single material fused into a unit, and the clarity of the chair figure—makes the Lambda chair a particularly evocative example of Zanuso's approach to the problem of the expression of the production technique, on one hand, and its assimilation to a figure at

³⁹⁶ "[I]f the plan was plywood or plastic laminate, the risk of shredding prompted the need of a protective apparatus. We then thought to cover the edge in a metal profile. It is clear that at this point the formal problem of reconciling the two topological tendencies emerged with an evidence not previously well-defined." Zanuso, "Relazione sul tema 'L'importanza dell'industrial design nella fabbricazione di beni di consumo,'" 3. "[E]ven with its defects it was concrete proof of the methodology and the basis for a long process of development. The attachment of the legs to the seat proved to be strengthened in the manner we hoped, increasing the surface area of the leg in the upper part." Ibid., 5.

³⁹⁷ "All these integrated modifications toward a more precise formal determination were documented in the drawings with every detail and numerous sections. The drawing thus permitted us to make the form and dimensions of a few elements of detail more precise; which opened the way to the inverse procedure, the verification through models." ("Tutte queste modifiche integrate da una più precisa determinazione formale vennero riportate su disegni con ogni particolare e numerose sezioni. Il disegno ci permise dunque di precisare la forma e le dimensioni di parecchi elementi di dettaglio; da qui si riapriva la via al procedimento inverso: il controllo sui modelli.") Marco Zanuso, "Relazione sul tema 'L'importanza dell'industrial design nella fabbricazione di beni di consumo,'" 6. "The chronicle of our work could be a contribution to that which an organized and systematic investigation could offer to the qualitative determination of the object of use with respect to the productive and commercial suggestions for unique elements with which to determine productive design and planning." Ibid., 2.
the scale of the whole object, on the other. The iconic shape of the
chair would be the basis for chair designs by other designers and
companies, in addition to variations covered in leather, or in
unfinished metal, by Gavina itself.

More to the present point is that the chair lent itself to
rhetorical juxtapositions of old and new in interiors, as in one
example where a chair in brushed-metal finish was placed in a
traditional bedroom; or another example in which a red chair sits in
an office next to a sculpture.³⁹⁸[fig. 3.18]

In the furniture piece, in contrast to the architectural work,
Zanuso employed an iconic shape that was strong enough to absorb the
physical traces of production. For instance, at the point where the U-
shaped legs were welded to the seat, a notch occurred; but the
suggestion of a "chair" in the lines of the whole was sufficiently
strong that the notch is barely noticeable. Through the
superimposition of the figure over the bare physical facts of
production, the image of the object was simplified. Another way to

³⁹⁸ The images are from Domus (December 1964) and Ambienti (May 1970),
respectively. Such juxtapositions recall what Bruno Munari had presciently
called the "gusto del gusto" ("taste of tastes"), in an essay that had
appeared in Domus during the 1940s. "I would like to have a park with many
pavilions. In one I would put a rococo ambiente and . . . a desk of glass and
white iron with illumination. In a bright crystal I would put a large baroque
chair . . . . You say I'm crazy? We will see." Bruno Munari "Il gusto del
gusto" Domus 202 (Oct 1944): 28-9. ("Mi piacerebbe avere un parco con tanti
padiglioni. In uno farei un ambiente rococò e . . . una scrivania di vetro e
ferro bianco col luminator. In un ambiente di lucido cristallo mettereì una
grande poltrona barocca. In un altro un tavolo del 400 con attorno sedie
impagliate di Vienna. In un altro una libreria floreale con sedie e un divano
neoclassici. In un altro una sala gotica con tappeti persiani e quadri di De
Chirico e un grande tavolo pompeiano di marmo. E infine in una grotta
mettereì quattor poltrone seicentesche con il necessario per fumare moderno e
un quadro astratto mio. Dite che sono matto? Staremo a vedere."
describe this quality of resolution is to cite a coincidence between
the assembly of the particular chair and the figure of the iconic
chair, recalling Pagano's metaphor in which the architectonic image
acts by bringing the interior "into focus." The chair was developed
into a familiar visual icon that contributed to an interior plan.[fig.
3.19] Eugenio Gentili observed that the Lambda chair was neatly
integrated into Zanuso's apartment design, without giving the
impression of a prototype.399

Zanuso's apartment illustrates his pursuit of a role for the
architect in maintaining a coincidence between the pattern of living
and the constructed physical surroundings. Although Zanuso did not
refer to Pagano explicitly, in his various comments, the task he
performed was analogous to the role that had been outlined by Pagano,
who had characterized the task of the architect as bringing the home
in line with the spiritual demands of the time through an
"architectonic image." Meanwhile, by grounding the plan in the
Socratic ("maieutic") understanding of the individual lifestyle, and
by demonstrating a concept of coherency that could accommodate
individual choices, Zanuso continued along the trajectory on which he

399 "The common thread among the various personages of the interior
design is the quality of the individual components; and it is worth noting
how the modern furniture pieces are not of casual design, but each one in a
model studied in the function of current problems, such as problems of
industrial production. Zanuso is one of the Italian protagonists in this
field: and it is significant to see here, not exhibited as prototypes, but
calmly put in place as objects of use, models such as the lunchroom chair in
pressed sheet metal, or the beautiful square table of the studio, or the
recombinable bookshelves that form partitions and divide the studio from the
entrance." Gentili, "Marco Zanuso: la nuova sistemazione del suo alloggio a
Milano," 12.
had embarked in the 1940s, departing from that collectivist ideal of Fascism that Pagano had still hoped to serve, toward a sensibility for the modern physical surroundings that would serve the individual. (See Chapter 1.)

Zanuso's plan placed a greater emphasis on the manner of living and working, than on the form of the material thing, as an index of contemporaneity. His remarks on the "antiquariat," which appeared as part of a discussion in which he spoke with a gallery owner and a collector (published in the same issue of Abitare as Gentili's piece on the Zanuso apartment, but in a separate article), underscore his conception of aesthetic contemporaneity as a part of the ambient cultural atmosphere, not a property that can belong to an object alone.400 The theme of the article was a prevailing taste for cheap imitation of antiques: the public had developed an aversion to modern design, and was drawn instead to furniture that resembled antiques, and to entire suites of rooms that resemble interiors from the past.401

Someone who sought to recreate a seventeenth-century interior in a contemporary dwelling, for instance, would earn Zanuso's label of "false" antiquarian. In fact, Zanuso argues, the atmosphere of the

400 Marco Zanuso et al. "l'Antiquariato oggi" Abitare 7 (Mar 1962): 3-11. The article is a transcript of a discussion between Zanuso, a gallery owner, and a collector.

401 "We are dealing, in my view, with an attitude of reaction of the bourgeois class to the proposals that the modern movement expressed in definitive terms around 1930." Ibid., 4. "The problem we are discussing interests Abitare precisely because it pertains to the 500,000 people who drift toward the false antiquariat, not the 5,000 of the true antiquariat. What does this phenomenon signify? Is it a phenomenon that is cultural, affective, economic, does it have a meaning on the formal level, on the social level, is the refusal of the modern justified?" Ibid., 11.
time was informed by habits, routines, and ways of doing and making things that belonged just to that time. Without that ambient culture, the objects are empty. Speaking on the same theme, Zanuso described architecture in terms of a continuous whole including interior, exterior, and objects.

Architecture is always a unique thing, there is no inside and outside. There are values that are respected in its complex whole, in the fabric that binds it: the house of 1800 is not made of furniture, of the curtain, of the heating brazier, it is all the whole that gives a climate and a significance to these objects.

The Architect and the Furniture Producer

Between the late 1940s and the 1960s, Zanuso developed designs for several small-scale furniture producers, including Gavina (producer of the Lambda chair), Arflex, Kartell, and others. The cases of C&B Italia and ELAM offer insight into different aspects of these collaborations. Each was headed by a "self-made" man who was motivated to pursue mass production and to address his products to the consumer market. These were not the largest, wealthiest manufacturers but small, high-risk enterprises; even in the mid-1960s, mass production was not yet widespread. The head of C&B, Piero Busnelli, had taken

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402 "A dining room from long ago evidently was inserted in an environment with values spatially and volumetrically seventeenth-century, corresponding to different relationships, profoundly different, from whose that determine the spaces in which we of today live. It does not seem possible to me to reconstruct a seventeenth-century atmosphere in a place with 3.3 meter [10-1/2 ft.] ceilings." Marco Zanuso et al., "L'Antiquariato oggi," 8.

403 Ibid., 8.
pains to appropriate—and sometimes improvise—the necessary manufacturing technology. The documentation of Zanuso’s collaboration with both companies, in his Eco della stampa file, illustrates the convergence of different lines of communication around the product, including the importance of presenting the product to the public by means of the press. The articles offer a glimpse of the vicissitudes of design from the point of view of the commercial sphere, including the perspective of the small-scale producer.

Piero Busnelli was born into a large furniture-making family in Brianza, in 1926. His father died in 1943, and after the hardships of the war, Busnelli (with his brother Franco) revived the company in 1953.404 Brianza, which had begun to develop as a seat of industry even in the 1920s, is in the region of Italy that was described ambivalently in letters written during that decade by the Italian-German philosopher Romano Guardini, who described the sight of Brianza from the train that ran from Milan to Como.405 The landscape would figure for him as a palimpsest of industrial development and modernization as they bore on the pace of life and thought. But while


405 Romano Guardini, Letters from Lake Como (Grand Rapids, Michigan: Wm. B. Eerdmans Publishing Co., 1994). “I had hardly reached Italy before I felt that I was being addressed by something very significant, including an element that made me very sad . . . . what has already taken place up in the North I saw beginning here. I saw machines invading the land that had previously been the home of culture,” Guardini wrote. Ibid., 5. “Nature, then, has been reshaped, subjected to mind and spirit, yet it is perfectly simple. . . .” Ibid., 6. Brianza worried Guardini, but also suggested to him an ideal of “Urbanitas” . . . “city living, a city atmosphere, yet one in which a nobly shaped humanity can flourish.” Ibid.
Guardini wrote of traversing "the valleys of Brianza, from Milan to Lake Como, luxuriant, cultivated with zealous industry, encircled by austere mountains, broad and powerful . . . ," in fact the Fratelli Busnelli, and the majority of furniture companies in Brianza, still produced furniture by artisanal methods, primarily by applying upholstery to a wooden frame. Piero Busnelli would later compare the company structure to the model of the "school." 406

By the early 1960s, Piero Busnelli was experimenting with materials during the evenings; and in 1966, after seeing a new process for molding and coating foam rubber at a trade fair in London, he left the family business, determined to start a firm that would produce furniture by mass-production methods. 407 His company was backed by the larger firm Cassina, a well-known manufacturer of furniture that employed noted designers, but still made its furniture by traditional methods. Cesare Cassina, the younger brother of the company's head, was persuaded to support Busnelli, and C&B Italia began as a subsidiary of the larger company, sharing Cassina's facilities and seeking out its designers. But by 1973, the offshoot had begun to outperform the parent. Busnelli was offered retirement but instead chose...

406 "He understood before the others that he had to break with artisanal tradition of specialized work, from the business as a school, at which a boy would arrive and first he would carry packages, then be taught to work the wood and then to make the upholstery . . .." Giorgio Bocca, "Giorgio Bocca racconta Piero Busnelli." In Un'industria per il design, 30.

to buy out his partner, with the assistance of local banks. Thereafter
the company was renamed B&B Italia.408

Busnelli would remark that he "stole" Zanuso's concept for the
Lady chair, for his own early experiments in upholstered foam-
rubber.409 A look at some of the furniture produced by C&B shows that
the various designers worked within a palette of bent structural
frameworks and upholstery over diverse kinds of foam rubber, at C&B
and indeed at Arflex and other companies in the region as well. The
chair designs for C&B Italia alone are a study in the seemingly
endless variations on the theme of upholstery on bent sheet metal.
Marco Zanuso's focus in the Lombrico seating, which was one of the
company's first products, was "the module as the means of aesthetic
guarantee, that in its iteration and continuity, arrived at a dynamic
image."410[fig. 3.20]

The special interest of C&B Italia, for understanding Zanuso's
involvement in furniture production, lies partly in Piero Busnelli's
embodiment of a set of personal traits of individualism and a
visionary outlook on everyday life that was compatible with the
imagination of the architects with whom he worked. An example is his
interest in the manner of making contact with the public. Advertising
imagery for Marco Zanuso's Lombrico, produced by C&B Italia in 1967,

408 Busnelli joked to the author that the new name meant "Banks and


410 "Progetto n. 3. Divano 'Lombrico.'" In Un'industria per il design,
380. The author observes that the Lombrico was rendered obsolete only when
technological changes made faster production methods possible.
made use of a barefoot female model. This reflected Busnelli's sense of publicity, which led him to put his confidence in talented image-makers. For instance, the first "hit" product was the "Coronado" chair designed by Tobia Scarpa, with publicity by Enrico Trabacchi.\(^{411}\) The photograph that was used in advertisements—in which a female model balanced on the chair, one stockinged foot on the back and one on the arm—had been intended to emphasize the properties of the Dacron stuffing (Dacron was a polyethylene material manufactured by Dupont) but also to approach the viewer in human terms.[fig. 3.21]

Busnelli's sensibilities for mass production had led him to define his company in a particular way. To ensure maximum flexibility, Busnelli insisted on assembly line procedures that could be learned in eight days. On going into partnership with Cassina, he agreed to divide the profits but stipulated that he would not employ Cassina personnel. He would not take on any experienced Cassina artisans; "No master upholsterer who thinks he knows how one makes a chair, because the point is to do it a different way."\(^{412}\) He would explain his attraction to mass production in terms of a desire to be able to anticipate a modification that would appeal to the consumer, and to

\(^{411}\) Tobia Scarpa (1935–), son of Carlo Scarpa, was be the principal designer for C&B Italia (joined by his wife, Afra), designing many chairs and the company's first factory building, built at Novedrate in 1968. "Come nasce un'azienda," 22.

\(^{412}\) "'Nessun maestro tappezziere che pensi di sapere come si fa una poltrona, perché si tratta di farle in modo diverso.'" Ibid., 20.
put it into production right away and—as often happened—before it could be produced by anyone else.\textsuperscript{413}

This compelled Busnelli to seek to master the new techniques himself, which involved the use of bulky pneumatic equipment. Busnelli's account of the attempt to reproduce the equipment he had seen at the London trade fair where he discovered cold-pressed polyurethane foam is a case in point in the demands and experiments that seem to have typified the industrial design experience of this period: ingenuity, limited means, and brute determination. "We returned home and procured the components, call them component 'A' and component 'B.' We got to work right away to construct a kind of foam machine of our own construction, with a drill as the mixer. . . ."\textsuperscript{414}

Piero Busnelli, like Marco Zanuso, paid particular attention to the female consumer. In an interview, the entrepreneur characterized his interest in mass production in terms of a "readiness" to respond to everyday problems; "I hear a woman speaking who complains of the double work, in the office and then at home, to make dinner, to remake

\textsuperscript{413} Bocca, "Giorgio Bocca racconta Piero Busnelli," 29-30.

\textsuperscript{414} Piero Busnelli, quoted in "Come nasce un'azienda," 18. Busnelli continued: "'The influx of the two components was regulated by a series of pumps and a few mechanical passages were made with motorcycle chains. We made such basic equipment in this way: the two components, in the right dosage, arrived at a certain point on the blower, came into contact with the air, and this made the foam solidify prematurely. . . .'' Ibid. ("'Torniamo a casa e ci procuriamo i componenti, che si chiamavano componente A e componente B. Ci mettiamo subito a costruire una specie di macchina per schiumare fatta da noi, con un trapano come mescolatore. L'afflusso dei due componenti era regolato da una serie di pompe e alcuni passaggi meccanici erano fatto con catene di motocicletta. Abbiamo fatto, così, questo rudimentale impianto: i due componenti, nel dosaggio giusto, arrivavano in certi punti sugli sfiatatoi, veniva a contatto con l'aria e questo faceva solidificare anzitempo la schiuma.'"
the bed—Remake the bed? So why don't we raise it a good ten centimeters so that remaking it will be less tiring?" Busnelli had spoken of wanting "to be ever ready to intuit ['scattare']."\textsuperscript{415}

Zanuso's designs for the company ELAM (\textit{Ezio Longhi Arredamenti Moderni}), a maker of cabinetry based in Meda, helped that company, as well, to bring a product to the market. ELAM, like Gavina and C&B Italia, was a small company whose head, Ezio Longhi (1932—), had taken over his father's carpentry shop as a teenager, providing for his family after his father's death during World War II. As he developed his company during the 1950s, Longhi acquired a basic design education through local trade education programs.\textsuperscript{416} He had worked with other architects before he met Zanuso; but the "E5" kitchen cabinetry system (1965), designed by Zanuso, established the company's reputation.

Newspaper articles about ELAM, collected in Zanuso's press clippings file, indicate the routine mention of the architect's name in the furniture company's fundraising and publicity.\textsuperscript{417} Zanuso was named in an article dated February, 1972, describing a press conference for shareholders; in a profile of ELAM's chief, Ezio Longhi, described his biography and everyday life (June 1972); and in


\textsuperscript{416} "L'arredamenti che strizza l'occhio," \textit{Staff} 15 June, 1972, 75-77.

\textsuperscript{417} Zanuso was the principal designer for ELAM. By contrast, Zanuso designed specific products for C&B, whose principal designer was Tobia Scarpa.
articles from furniture magazines that illustrate the company's furnishing systems, including three short pieces published in March and May, and a more in-depth examination of the updated "E5" kitchen, in October of the same year.418

The various articles show how the kitchen cabinet system was presented in different ways, depending on the audience. An account of the E5 in Interni, whose audience was architects and designers, emphasized the plan and specifications, including four kitchen examples in different configurations, using photographs and plans to illustrate the space. By contrast, an article in Amica, a lifestyle magazine for women, emphasized the bright figures of colored tiles on the walls and floor; as well as the colors of chairs and tables and cabinets.[fig. 3.22]

An article reporting a 1972 press conference shows how the variables of the system were periodically manipulated into new versions, and how the designer's name was used as an assurance of success. Addressing his shareholders, Longhi had summarized Elam's performance in the past year and announced new products, including the E5S and E5L kitchen variants, with appliance sets in stainless steel or lacquer; and new bed and chair components for the E6 bedroom.419

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419 "La 'Elam' nel 1972; i programmi della nota industria di mobili moderni di Meda" Corriere d'Informazione (Milan), 25 February, 1972.
article mentions Zanuso’s name in relation to the firm and each of the products; "In the top line, the launch of the E5S-E5L, designed by Marco Zanuso . . . . The sector of containers is enriched by new pieces also designed by Marco Zanuso . . ."\textsuperscript{420}

The E5 cabinets, which featured options like a pull-out table, could accommodate various layouts of stove, refrigerator, dishwasher, and washing machine by third-party companies such as AEG (the German firm). A standard accompaniment of the kitchen was decorative wall tile. The sunflower pattern shown in one image of the E5 was one of Zanuso’s designs for CEDIT.\textsuperscript{421}[fig. 3.23] Optional accessories included a kitchen table and chairs; the chairs, made of a molded plastic seat on bent steel legs, were also designed by Zanuso. The E6 was an analogous system for bedrooms. Its cabinets, beds, and chairs were made of plywood with bright-colored polyurethane varnish, and they too could be combined with other products in the room (fixtures, linens).\textsuperscript{422}[fig. 3.24]

In Zanuso’s work for ELAM, one can see that he took on the problem of connection between the realm of design (the product) and of architecture (the room where the product would be placed). The

\textsuperscript{420} "La ‘Elam’ nel 1972; i programmi della nota industria di mobili moderni di Meda," ibid. ("In prima fila, il lancio della cucina E5S-E5L, disegnata da Marco Zanuso [. . . .] Il settore dei contenitori si arricchisce di nuovi pezzi sempre progettati da Marco Zanuso: letti, lettini, tavolini da notte completano il Programma E6 . . .")

\textsuperscript{421} Zanuso, who had designed the CEDIT factory at Palermo (1956), had been one of the first architects to design tiles for that company (the factory is discussed in Chapter 4).

\textsuperscript{422} Casa arredamento giardino, May 1972, 12-13.
foundation of the system was the use of wall-to-wall banks of cabinets to create an aesthetic unity by providing a monotone backdrop to the accessories. This product structure offered a clear aesthetic strategy to the user. Against the simple "ground" provided by the minimally-detailed cabinets and bedroom furniture, motifs in the tile, the owner could change the decor of the room by replacing the kitchen chairs, bed linens, or upholstery. From the point of view of production, new options for the room could be offered without the need of construction. The combination of accessories with the relatively stable cabinet design allowed the company to meet the convention of periodic offerings to the public by unveiling a new finish or furniture piece, with minimal effect on production.

In addition to demonstrating Zanuso's relationship to the consumer market, the Elam cabinet systems marked a stage in Zanuso's approach to the relationship between object and building. The built-in storage replaced the old-fashioned movable type, while eliminating a furniture piece and providing additional storage. By so doing, the E6 bedroom reportedly "revolutionized the old concept of the armoire"—and could bring "perfect elegance" to rooms for adults or children. But the installation of cabinets from wall to wall contrasts with the strategy Zanuso had applied to his own apartment design, where he had

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424 "La 'Elam' nel 1972; i programmi della nota industria di mobili moderni di Meda," ibid.
used cabinet/shelf/partition units to divide one room from the next.\footnote{This was regarded as part of the planning concept, and a photograph of these units figured prominently in articles on the project. The shift toward built-in furniture had been encouraged by Pagano in his "Technique of Living" exhibition, in 1936.}

[fig. 3.19] An intermediate approach that Zanuso had tested was to build kitchen storage out of wall material. This is demonstrated in a project that appeared in the journal \textit{Artecas\a}, in 1961, designed by Zanuso with Cini Boeri.\footnote{Boeri, then a young associate who had worked in his office since 1956, would leave to establish her own firm in the mid-1960s.} The need for cabinets had been eliminated by the use of open shelves detailed like hanging boxes, and drawers with smooth fronts and sides, placed in a framework of wallboard. The author of the article notes that this approach is an alternative to either artisanal cabinets (which are shown in a kitchen whose fittings are disparaged as "colonial taste") or mass-produced cabinets "in the American style" (the results of "excessive research into functionality").\footnote{"Interesting and new is the solution adopted in furnishing this kitchen. The elements that compose it are constructed, as is common, in wood and also in wallboard covered with tile . . . . the drawers beneath the counter against the walls behind them and the cutting board are the only wooden elements in this brilliant solution." "Cucina" \textit{Artecas\a} 18 (1961) [unnumbered pages]. FMZ MZ ECO, Fondo Marco Zanuso, Archivio del Moderno, Mendrisio. In Italian: ("Interessante e nuova e' la soluzione adottata nell'arredare questa cucina. Gli elementi che vi compaiono non sono costruiti, come è uso comune, in legno bensì in muratura ricoperta da piastrelle smaltate . . . . i cassetti posti sotta alla mensola addossata alla parete di fondo e il piano del togliere sono gli unici elementi in legno, che compaiono nella brillante soluzione.")}

The ELAM designs established relationships between the building envelope and the interior, and between the interior and the product. If Zanuso's apartment had tested the built-in furniture piece as an
approach to design by an architect, the ELAM systems proposed a more complete solution to the object/room boundary. By running the cabinets from wall to wall, Zanuso used the system to dissociate the room from the rest of the house and suspend the room's contents in their own aspatial realm. In effect, the cabinets were a "joint" that could reconcile the more stable and fluctuating parts of the home.

In his 1954 essay "A New Chapter of My Life," Walter Gropius had opposed specialization and emphasized the importance of the architect's reflective attitude toward the use of technology.428 By 1957, when he reiterated his warnings about specialization and the civility of technology in an essay to launch a second journal of architecture in Milan (Zodiac), Gropius felt compelled to refer to "communication and information services" of which there had been little hint in 1954.429 The "form of life" Gropius had begun to acknowledge, by 1957, was the spread of American style consumer society around the world as economies revived.430

429 "By the word 'democracy,'" he wrote, "I speak of the form of life which, without political identification, is slowly spreading over the whole world, establishing itself upon the foundation of increasing industrialization, growing communication and information services, and the broad admission of the masses to higher education and the right to vote."
Walter Gropius, "Apollo in the Democracy" Zodiac 1 (1957): 9-14 (9). In keeping with convention, the first issue of Zodiac included an essay from a prominent figure who blessed the journal (in a manner of speaking) and was in turn marked out by it as a presiding example.
430 Gropius, who lived in Massachusetts at the time, clarified that his theme is "democracy" as he knew it in that context, which he saw taking over "the whole world." "Apollo in the Democracy," 9.
In the early 1950s, Italian architects had sought to develop architecture in such a way as to "civilize" technology. The architectural problem had been constructed as a dualism between art and technology, and the contemporary industrial design discourse, first formulated in *Stile industria* in 1954, had reflected this dualism. With the emergence of a competitive, free-market consumer economy in postwar Italy, by 1960, the increasing role of the "information economy" in the apprehension of the product by the public had brought a new complexity to the design problem. Popular sensibilities were now a third term and an important, but mysterious, variable. Moreover, the new way of life, in which the world was comprehended from a distance, through increasing volumes of information, had brought new "needs" and put in question the relationships between individuals, society, and different kinds of object.

In 1962, Billa Zanuso described the effects of consumerism in Milan, in her 1962 book of short stories and observations, *Nostra Signora di Milano*. She wrote that in contrast to Rome, Milan had no trees, fields, water, or any "epicurean" pleasures; instead it was defined by cold weather, haste, and the urgent need of money. Under these circumstances, advertising lured the Milanese into a passionate relationship to consumer products. The consumer lifestyle, in this
depiction, was a stand-in for trees, fields, and epicurean pleasures; yet its desires were never satisfied.431

The notion that consumer culture had become part of a kind of second nature in Milan helps to account for the contemporary portrayal of Marco Zanuso, in the popular press, as a "naturalist" of the technological world.432 An article in which the interviewer, Virginia Elia, described a visit to Zanuso's studio in Via dei Bossi 4 (in central Milan), conveyed a mixture of fascination and uneasiness not just about Zanuso, whom she found intimidating, but about the manifestation of old and new Milan in its architecture and on its streets.433 Zanuso's office was set in an old building; leaving, on her way down the stairs, Elia had thought of women in satin skirts, stepping into rich carriages, but then "the horns of the hurried cars break the enchantment of that tranquil world and bring me back with a thousand others that move in the city of asphalt, in the Milan of

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431 Billa Zanuso, "Dolce Morte," in Nostra Signora di Milano (Milan: Lerici, 1962), 125-127. "[E]ver cordial and euphoric, pushes us to the love of products, and stern designers with their eloquent discourse persuade us to admire them. Docile, we love them. We admire them, those expensive products, and we work hard to possess them. No sooner are they possessed than the advertisements admonish us that this was not the perfect product but another one, a more expensive one [. . .] in comparison to which our recent acquisitions are already old, obsolete, defective. And we are down to work again, to buy [. . . .] We consume the days in a hurry, deaf to any warning."(127)


Industrial Design." Industrial design, for Virginia Elia, set the tone of life in Milan, or at least, it was a figure around which various stresses of life in that city were perceived to be organized. The role of the architect-designer, in this light, was to identify the needs of those who lived there, and to make the connection between the available means and their fulfillment.

In the early 1960s, Zanuso continued to believe in the urgency of a cultural development of the terms and goals of production. He also maintained a degree of confidence in the architect's ability to develop sensibilities that were adequate to problems of industrial production. His pursuit of furniture and object design parallel to architectural practice enabled him to grasp the problem in more intrinsic terms than a simple distinction between buildings and objects would have allowed. Taking a more inclusive attitude than some contemporary critics, Zanuso set out to find a creative liberty that could only come from a thorough knowledge of mass-production practices. In remarks on tradition, in 1955, he had spoken of the architect's "maturity" in these terms. Only by immersion in the field

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434 Elia, "Marco Zanuso l'architetto che crede nella funzione benefica dell'industria sull'architettura," Ibid., 12. ("L'intervista è finita. L'architetto è stato esauriente nelle sue risposte, tanto da sollecitarmene altre. Ma il tempo è passato. Lo osservo, e mi accorgo che ormai vuol terminare il colloquio. Altre impegn bassano alla sua porta. Lo ringrazio e me [...] soddisfatta di quanto me ha detto. Lasciando lo studio di Zanuso [...] per la grande scalinata della casa patrizia immagini del secolo passato mi si fanno intorno belle milanesi scendono la gradinata nel fruschiare di [...] gonne di raso, salgono nelle richhe carrozze [...] lasciano dietro di sè lo scalpitare dei cavalli. E [...] un attimo. I clakson delle macchine frettalose rompono l'incanto di quel mondo tranquillo mi riportano insieme a mile altri che si muovono nella città die asfalto nella milano dell'Industrial Design.")
of manufacture could the architect acquire the knowledge that would enable him to properly address his time through his architecture.\footnote{\textsc{The architects find themselves today, still, in a condition of not being inserted into production and to have to act in a field of activity that limits their creative possibilities, that constrains them to close themselves in partial and circumscribed problems.} Marco Zanuso, "Un dibattito sulla tradizione in architettura" \textit{Casabella-continuità} 206 (1955): 49.}
The problem is not to conscientiously or agnostically refute technological development, for which there is no credible radical alternative, so much as to re-appropriate capacities to control technologies and science at a cultural and social level; if regulation is necessary it must presuppose a rigorous and cultivated consciousness of technology and of science that today presents itself as an indispensable condition of civility ["civiltà"].

—Marco Zanuso, Memoir

During the 1950s and early 1960s, Marco Zanuso pursued a role of "responsibility," both in terms of technique, and the manner in which the object was presented to the user to be accepted as an implement for living. As he would state the matter years later, in the speech excerpted above, if the end of the architect was to achieve a role of responsibility, and to promote a kind of value that was distinct from gratification, he would need some kind of "cultivation," rather than technocracy, to guide its application. To some extent, he found such a concept in the production-philosophy of Adriano Olivetti. Zanuso's factories for the Olivetti company, a producer of internationally-renowned typewriters and adding machines, were explorations of industrialized architecture in the context of this firm. Through their reflection of the approach to architecture and product design at Olivetti, these factories were distinctive studies in the relationship of architecture and industrial design.
The potential of a culture in which the deliberate practice of industrial design could be closely fitted to the needs of the public, in the coordinated spheres of the product, commercial art, architecture, and urban planning, was explored in the writing of more than one Olivetti collaborator. Two representations of a civil industrial culture emphasize salient aspects of that corporate culture, through which it constituted a special context for Marco Zanuso's research in industrialized architecture.

Roberto Guiducci, an Olivetti project manager who worked with Zanuso on the factories at Buenos Aires and São Paulo (and who was also a sociologist, urban planner, political activist, and poet), focused on the "city" as the unit of a collective for which to coordinate various kinds of design. His industrial design ideal is summarized in a 1970 article on the connection between industrial design and "social design." Guiducci wrote that, except for achievements in "a few nordic countries," industrial design was often "the qualification and distinction of the product" primarily in relation to market competition. In principle, industrial production could be applied to "the social fruition of the object itself" and extended to the national and international level. However, in order for that to happen (Guiducci argued), production would have to move

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436 Roberto Guiducci, "Dall'industrial design al social design," Pirelli (Jul-Aug 1970): 36-41. (English quotations of Italian texts are my translations except as noted. In cases of paraphrase, passages in the original language are appended to the citations, set in parentheses.)

437 Ibid., 36. ("... [O]ualificazione e distinzione del proprio prodotto nei confronti di quella concorrenza che verso la fruizione sociale dell'oggetto stesso.")
beyond working "individualistically on single objects." The design problem would have to be addressed on a large scale. The city, "now as in medieval times" was a plausible sphere of intervention in which design could "operate with maximum imagination but in a context where many could have ends in common." 438

"What the hand of the artisan could once do, could today be done, in different conditions, by the hand of he designer extended in industry. The designer would exit from isolation and subordination, to work not for particularistic ends, but for general social objectives, coming to take part—as researcher and project leader, in the 'advanced service sector,' collaborating with other specialists and subordinating himself to the choices and verifications of the users, toward the common objective of giving a new liberating image to the city in all the associated forms of life." 439 However, "the decisive passage would be precisely in understanding the necessity to finally practice industrial design as "social design." 440 Guiducci implied that the political dimension of design would have to be explicit and commonly understood and endorsed.

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438 Guiducci, "Dall'industrial design al social design," 41. ("...[D] entro un contesto un contesto che abbia un fine comune.")

439 Ibid. ("Quello che allora poteva fare la mano dell'artigiano oggi può fare, in ben mutate condizioni, la mano el designer prolungata nell'industria. Il designer potrebbe uscire dall'isolamento e dalla subordinazione, lavorare non per fini particolaristici, ma per obiettivi sociali generali, venire a far parte—come ricercatore e progettista—del 'terziario avanzato,' collaborando con gli altri specialisti e sottoponendosi alle scelte e alle verifiche degli utenti, per lo scopo comune di dare una nuova immagine liberante alla città in tutte le forme della vita associata.")

440 Ibid., 41. ("Ma allora il passaggio decisivo starebbe proprio nel capire la necessità di praticare finalmente l' 'industrial design' come 'social design.' ")
Egidio Bonfante, in a characterization of industrial design published in 1956, emphasized the importance of information as an interface between the public and the product. Given the prominence of information media in contemporary society, and the prominence of design in these media, industrial design had the potential to be an organizing collective form of art, analogous to the cathedral, potentially the foundation of an entire social order. Bonfante explained his ideas in terms of relationships among the arts. Art, in its "so-called 'pure'" forms such as architecture, painting, and sculpture, had come to be limited by "more overbearing means of expression, information and diffusion that characterize our age." Bonfante mentioned radio, cinema, and television which, by their "natural force" had directed collective attention "toward interests far removed from a painting or statue." By contrast, the industrial product was a magnet for the same media. Having emerged along with contemporary information routines, the product was often described and elaborated in advance of direct experience, or simultaneous to it, in publicity about its technical aspects, or about the technologies that made it possible, or about its novel capacities. Bonfante implied that

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441 Egidio Bonfante, "La componente sociale nell'Industrial Design'" Comunità 40 (1956): 52. Bonfante was an artist who worked for Olivetti, the corporate sponsor of Comunità.

442 Ibid. ("[I]l limite di questa funzione delle arte così dette pure è segnato anche da altri prepotenti mezzi di espressione, di informazione e di diffusione che caratterizzano la nostra epoca.")

443 Ibid., 53. The new media "per forza naturale indirizzano la collettività verso interessi distanti dalla contemplazione d'un dipinto o di una statua." (53)
since the industrial product was at home in exchanges of information, the industrial product—more than the building or conventional art work—should be the preeminent art form, a modern analog to the medieval cathedral as an end of cultural organization.\footnote{Bonfante offered a short history of the cathedral as an organizing cultural form. As destinations for worship and ritual, temples and cathedrals had a place in contemporary life; for that reason, they were the premise of the highest expressions of the fine arts, such as painting and sculpture, and the works of artisans. Bonfante, "La componente sociale nell' Industrial Design," 52.}  
The cathedral is a touchstone in claims about the synthesis of the arts, notably in the theories associated with the Bauhaus at Weimar; but Bonfante's version is remarkable for its relatively negative assessment of the definitive projects that were considered as the epitome of the "modern" attitude. Citing "bridges, viaducts, large warehouses, the first constructions in iron and concrete," Bonfante follows Sigfried Giedion, the Swiss theorist of modern architecture who, in a 1926 book devoted to incipient structures and techniques, had heralded these as the fingerprints of a new kind of civilization.\footnote{See Sigfried Giedion, Building in France, Building in Iron, Building in Ferroconcrete. Introduction by Sokratis Georgiadis, Translation by J. Duncan Berry (Santa Monica: Getty Center for the History of Art and the Humanities, 1995).} In contrast to Giedion's optimism, Bonfante saw bridges, viaducts, and their respective techniques as the work of a culture in which aesthetic sensibility has been lost. Italian art had escaped from the nineteenth-century legacy whose weight had been keenly felt during the 1920s, but the style had yet to recover the prior level of aesthetic quality. In Bonfante's view, the scientific-
positivistic attitude has been exalted at the expense of aesthetic experience.446

Industrial design was an occasion and practice that could ennoble the commercial arts and demand an updating of fine art. By the same token, industrial production could be a premise for the elevation of the social status of the worker, analogous to the former role of the artisan. A key observation in Bonfante's connection of industrial arts to labor is that an industrial product demanded the input of many people. Bonfante compared the industrial design product to a film, with its multiple authors including a director, producer, actors, and many smaller, less visible but indispensable contributors. Not only the industrial designer but also the factory worker should be considered to be an "author" of the industrial design product.447

The positing of the industrial product as a collective work of art around which a society could be organized, and which could earn esteem for the many kinds of laborer who contributed to its production; and the notion of the city as a unit in which various

446 Egidio Bonfante, "La componente sociale nell'Industrial Design,"
53. "[T]echnique and practice, connected to the positive science that constituted the great mirage of the century, have assumed the value of an ideal, while the old aesthetic ideal fell into useless academicism."(53)
"[L]a tecnica e la pratica, collegandosi alla scienza positiva che costituiva il grande miraggio del secolo, hanno assunto il valore ideale, mentre l'antico ideale estetico scadeva ad inutile accademismo. I ponti, i viadotti, i grandi magazzini, le prime costruzioni in ferro e in cemento sono il precedente diretto del disegno industriale; la loro «bellezza» dipende dalla loro perfezione tecnica e dall loro aderenza ad una funzione pratica; e poiché la tecnica e la pratica implicano un fare, l'idea del bello si connette al fare e non più al contemplare") On the other hand, the "old aesthetic ideal" that produced the cathedrals had declined into "useless academicism," according to Bonfante, due to over-compensation in the opposite direction.[Ibid.]

447 Ibid., 55.
kinds of design could be applied in a coordinated way to collective needs; these ideas reflected the ideas of Adriano Olivetti, and certain aspects of the culture of the Olivetti company, as it had been developed through a series of initiatives since his assumption of its leadership during the 1930s.

In certain ways, the corporate culture of Olivetti did approach the connection of product design, architecture, and planning to a "city," and the characterization of industrial production as a collective art form. The political dimension of the provision of resources (of shelter, education, and living and working spaces) was acknowledged by the company through various kinds of public works, within its campuses and in their immediate region, particularly at Ivrea, the town in the Piedmont where the headquarters was located. Architecture had a role in this acknowledgment, as the creation of buildings that would symbolize these social commitments.

Production was approached as a form of art, not only in the process of product design itself, but also through various measures taken to acknowledge the contribution of different kinds of worker. By appropriating the tasks of company publicity, Adriano Olivetti led the company in taking control of its representation, and the representation of its products, in the press. By accepting the preeminence of media representation, he would turn the defining circumstance of the information age to his company's advantage.

In this context, Marco Zanuso's buildings were emblematic of industrial production in various ways. As modular buildings, designed
for amplification through the reproduction of the module, they were examples of "industrialized architecture." As works of architecture, they reflected the manner in which the process of industrialization was led by Olivetti, in the Ivrea region, even though only one of these particular buildings (the Scarmagno factory) was built near Ivrea. In addition, as design projects for Olivetti, they were approached according to the collaborative method that was practiced by its product design teams. That method had been strongly influenced by publicity, which had in turn originated in the collaboration between Adriano Olivetti, the poet/engineer Leonardo Sinisgalli, and artists from the graphic arts avant-garde in Milan, during the 1930s. The Olivetti product design aesthetic is reflected in Zanuso's factory designs, and especially in the factory at Buenos Aires. Zanuso's factories for Olivetti were realizations of Zanuso's ambitions to industrialized architecture that reflected the particular industrial design culture of Olivetti.

**Industrialized Industrial Architecture: Factories at Buenos Aires, São Paulo, and Scarmagno-Crema-Marcianise**

In his five factory building designs for Olivetti—at Buenos Aires and São Paulo, and in the Italian towns of Scarmagno, Crema, and Marcianise—Zanuso advanced his research in mass-produced architecture. He met and surpassed his prior stipulations about prefabrication, in buildings whose typological innovations were responses to the client's particular needs. These buildings were cited for their dramatic
architectonic appearance; the factories at Buenos Aires, Argentina, and São Paulo, Brazil, were published in Casabella-Continuità, while the Argentina factory was singled out for praise by the British critic Reyner Banham. Zanuso's Olivetti factories were also key examples in the Italian literature on "industrial architecture," whose protagonist critics advocated collaboration between industry and architects, scrutinized the factory as an index of both industrial and architecture cultures, and evaluated the extent and limits of such collaborations to date. Although the present theme of the status of these factories as industrialized architecture in the context of Olivetti industrial culture does not permit an exhaustive description, it is essential to establish the character of these buildings, in which the integration of building systems remains explicit, and the manner of typological variation from one to the next through the elaboration of the building structure.

The criteria for prefabrication that Zanuso had articulated in his earliest writings on prefabrication, in 1946, including design and elaboration from a construction module, and the use of stable, easily-


449 See Pier Carlo Santini, "L'architettura industriale" L'Illustrazione del medico 201, 17-20; Roberto Guiducci, "Dal Razionalismo al Revival" Pirelli Rivista d'Informazione e Tecnica 14:5 (October 1961), 59-60; and Giuliano Guiducci, "Fabbriche dome monumenti," on industrial architecture in Latin America, in Pirelli Rivista d'Informazione e Tecnica, ibid., 61-65, 88.
transportable materials and mechanical connections.\textsuperscript{450} His factories for Olivetti entailed the iterative elaboration of a building system based on a module of components that could be cast on site in reinforced concrete. The point of departure for this series of factories was a structural system Zanuso had first used in the factory for another company, CEDIT ("Ceramiche d'Italia" or "Ceramics of Italy"), a maker of ceramic tile based in Palermo, Sicily. The CEDIT factory, built in completed in 1956, was made of a modular structure of reinforced concrete, cast at the construction site. The building met the generic needs of workshop and warehouse: shelter with open floor space, illuminated through skylights.[\textit{fig. 4.1} The columns carried a series of beams. Orthogonal to these, flat concrete joists formed the peaked shape of the roof line and carried the roof, while between the joists, glazing admitted light. The first instance of the type of concrete column and "v"-shaped beam design that can be seen in variations in the F.O.A., and in the Scarmagno-Crema-Marcianise building system, appeared in this factory.[\textit{fig. 4.2}]

In the first proposal for the factory at Buenos Aires (F.O.A.) in 1955, designed roughly concurrent to the construction of the Palermo building, Zanuso appears to have adapted this system. In the earliest documented scheme for the F.O.A. (February 1955), the column had a barbell shaped section and flared upper portion similar to that at

\textsuperscript{450} Paolo Chessa and Marco Zanuso, "La casa prefabbricata: il modulo" \textit{Domus la casa dell'uomo} 205 (Jan 1946): 26-7; "La casa prefabbricata 2: i materiali" \textit{Domus la casa dell'uomo} 206 (Feb 1946): 31-33; "La casa prefabbricata 3: il cantiere" \textit{Domus la casa dell'uomo} 207 (Mar 1946): 17.
Palermo, while the beam was "V"-shaped, both beam and column including channels to carry pipes or wires.

Diverging from the CEDIT designs, in this F.O.A. scheme the column was turned 90 degrees and the beam was narrower and deeper than the shallow "V" at Palermo, reflecting the load-bearing role of the beam flanges at Buenos Aires, in contrast to their function of drainage in the early design. Drawings from this period include a rendering of the initial scheme and a sketch of a concrete beam with a tapered end. A shape matching the end of this early beam can be discerned in the rendering of the first scheme, and an axonometric drawing giving instructions for carpentry to make formwork also matches this beam version.451 [fig. 4.3] The walls were solid, the pilasters pulled back from the wall, and the roof inverted to form a shallow "V" in contrast to the taller pitched vaults in the Palermo project.452 [fig. 4.4][fig. 4.5]

A point of architectonic interest in the early F.O.A. design was the liberation of the exterior walls from the load-bearing function.

451 I refer to the drawing set as documented on microfilm, held in the Marco Zanuso Archive.

452 The lack of windows is not explained in the documentation. The literature on the Olivetti factory at Pozzuoli, designed by Luigi Cosenza and constructed at roughly the same time, suggests that the openness to the landscape is a gesture of compassion for the worker. A possible explanation for the lack of windows in the Buenos Aires factory is an anecdote in Guido Canella's 1963 profile of Zanuso: "An important Italian industrialist decided, years ago, to establish a base in a South American country. From Italy a team of technicians departed which . . . during a tour of the chosen site, found it occupied by a gang of pistoleros, armed by who knows whom, that decided to not allow the work to start. The team of technicians was compelled to transform into a cross between a posse of sheriffs and a diplomatic delegation. Among them was Marco Zanuso, and the base was built."

In the Palermo factory, the entire structural assembly had been legible in the closed end of the building. In the F.O.A. the walls were solid and the skylights, whose ends were enclosed, appeared to hover over them. This was dramatized by a continuous strip of clerestory glazing that ran around the perimeter. A note in the corner of one rendering of the 1955 main building reads: "non toccare assolutamente" ("not touching at all"); a drawing of the beam illustrates the tapered design that achieves this effect.[fig. 4.6]

The factory building system used for the buildings at Scarmagno, Crema, and Marcianise (1962-1972), would employ a variation on the theme of reinforced column and beams, with a similar column, flared at the top and containing channels for pipes or conduits. As in the F.O.A. but in contrast to CEDIT, the column flared on an axis to parallel to the beam.[fig. 4.7] An initial scheme for the factory at Scarmagno credited to Zanuso and another architect, Eduardo Vittoria, showed concrete columns bearing a spaceframe roof.453 As built, the factory roof was carried by two kinds of beam, both made of concrete. One type, with an upside-down "V" shape, was placed on the columns and on flanges to either side, carried a series of joists with an upright "V" section. The grid of these beams, all in the same horizontal plane, carried the roof made of metal, with fiberglass skylights.[fig. 4.7]

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453 The structural system bears a strong resemblance to the Covit textile factory designed by Eduardo Vittoria, built near Naples. Edilizia Moderna 82-83 (1963): 157. Specifically, the metal-framed roof and column system resembles early images of the Scarmagno-Crema-Marcianise factory, which show a metal roof structure and diagram of the building plan. Edilizia Moderna 82-83 (1963): 153.
4.8] Between the F.O.A. and the Scarmagno factory, Zanuso's factory architecture acquired a more extensive program of prefabrication.

The Factory as "Production Unit"

According to Marco Zanuso, who described the development of his Olivetti factories in a 1971 lecture on his Olivetti factories, the F.O.A. was designed to be a factory type called the "production unit."\(^{454}\) This characterization, which allowed for the rearrangement and reconfiguration of production machinery and processes in the building, is also evident in a monograph on the F.O.A., published by Olivetti Argentina, which lists as key characteristics of the final scheme: underground channels for connections to power, central air, lines of steam, water, and compressed air, to cover any arrangement of machines.\(^{455}\)

To this end, within months of the initial scheme for the F.O.A., the building design was edited to incorporate the ventilation system into the concrete structure, entailing a redesign of the beams, pilasters, and roof configuration. The plan of the first scheme, documented in a drawing in the archive dated February 1955, shows a prism-shaped outbuilding for the ventilation machinery. Air would have

\(^{454}\) "With this factory, for the first time in the story of the company has been established the concept of a production unit:—that is a 30,000 square-metre compound, housing a complete production cycle without being confined to a specific type of product." Marco Zanuso, "Five Factories," in Zanuso 1971 Dunhill Industrial Design Lectures (Melbourne: Trevor Wilson, 1971), 78.

\(^{455}\) Establecimiento Merlo (Olivetti Argentina S.A.C. el., undated [circa 1962]). FMZ, Archivio del Moderno, Mendrisio.
been blown into the building along the center, on the short axis, and
directed outward to either side. An outbuilding, meant to house a
large air handling unit with a powerful fan, appears in the rendering
with a large duct emerging from the top, under a sloping roof (see
fig. 4.6).

In the second scheme, the single large fan was omitted and
replaced by several small fans attached to the ends of the hollow
beams. A separate building volume devoted to climate control remained:
the "thermo-electric center" was adjacent to the main volume, in a
slightly asymmetrical position on the long axis. [fig. 4.9] However,
that building now housed a boiler and fan system for heating and
cooling by hot water, a supplementary system to the air system. A set
of documents produced on the occasion of the enlargement of the
climate control systems to accommodate the nursery school, which was
built later, describes the existing system as superimposed heat-
exchange circuits for radiant heating and forced-air cooling (plus
humidity adjustment). Of the major components of these two
interlocking systems, a heater, heat exchanger (for the radiant
heating), and a refrigeration unit were water-based and located in the
thermo-electric center, along with pumps. The fresh water supply was a
well, adjacent to the thermo-electric center (visible in the same
drawing). From the thermo-electric center, a channel runs along the
long central spine of the main building, in the floor, to circulate
water to and from the main building and its wings and outbuildings.456

456 FMZ MZ Microfilm 026a 250–257. Fondo Marco Zanuso. FMZAMM.
The result of this development was the integration of air conditioning into the modular structure of the building. With the control of ventilation and temperature as a standard amenity throughout, the space was prepared to accommodate any of the activities in the factory—from the metal shop and foundry to the management offices and reading room—at any point in the interior. The use of several smaller fans in place of one large one meant that the air could be augmented at the incremental scale of the building construction module. Guiducci, who reviewed the building for Casabella-continuità upon its completion in 1959, characterized the abandonment of the early scheme in terms of the adoption of the small fans.

The putative advantage of this decision for the enlargement of the factory can be deduced from the project drawings. One site drawing of the early scheme, on which a line indicates the potential for expansion, shows that the shape of the factory would have placed an upper limit on the usable square footage of the site as the corner of the building approached the railway line (the striped double line above the building on the site drawing). Expansion would also have been constrained by the need to enlarge the air handling fans as the building grew. The small fans were connected in a cybernetic system that allowed control of the climate from a central panel, with options.

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458 Ibid.

459 Microfilms [026a 200][026a 302]. FMZ MZ MICROFILM. Fondo Marco Zanuso. FMZAMM.
for manual regulation or regulation by thermostats in semi-autonomous climate zones.\textsuperscript{460} Zanuso remarked on this attribute of the system in his 1971 lecture.

The fundamental necessity for conditioning and energy distribution gave the pretext for the synthesis between structure and plant by the creation of hollow beams as channels. Particular attention was dedicated to devising a reinforced concrete structure that made it possible not only to integrate the air-conditioning and power distribution plants but also with regard to air conditioning, the possibility of varying its functioning in the various sectors.\textsuperscript{461}

Changes in the organization of the work floor, concurrent to change in the building design, indicate that the production unit concept may have been determined as the demands of production changed during the design and planning of the factory. Furniture plans for the F.O.A., showing the arrangement of equipment within the perimeter and among the pilasters (a grid of small double-"+" shapes) document the architect's process of establishing the organization the workshop spaces in the main volume of the factory, including one scheme in which the flow of production moves across the long axis of the building, where a metal press, cast iron and aluminum, equipment, characters and ribbons, finishing, and heat treatment were located, towards the assembly sequence; and one in which carpentry is located in a separate building.\textsuperscript{462}

\textsuperscript{460} The system is described in microfilms of the F.O.A. project, including a description of the methodology [026a 250-256] and a mechanical drawing of the heating and cooling systems [026a 257 and 257 bis] [FMZ MZ MIC 026a], Fondo Marco Zanuso. FMZAMM.

\textsuperscript{461} Zanuso, "Five Factories," 70-71.

\textsuperscript{462} FMZ MZ MIC 026a Documents [FP-A] (1956), and [P7a & b {98,99}], respectively. Fondo Marco Zanuso. FMZAMM.
A second set of drawings (circa 1958) shows a substantial reorganization of the work floor. Additional area equivalent to the area of the carpentry shop had been added, and apparently—judging by the increased white space in the drawing—part of this is circulation. The carpentry shop had been moved to a position adjacent to the bottom right. Meanwhile, the assembly line has been moved to the top of the drawing, near a wing extending to the left. The left-most end of this wing was devoted to packing and shipping; a drawing shows the adjacent driveway.\footnote{Labels on a contemporary site plan confirm access and circulation for trucks, as well as parking for cars (near the offices) and bicycles (near the workers' wing). FMZ MZ MIC 026a. Fondo Marco Zanuso. FMZAMM.}

The integration of the ventilation system into the transverse beams of the building entailed a redesign of several structural components of the F.O.A.\footnote{The beams' length was reduced (from 48m to 42m); the shape of the cavity was changed to a circle; and the flanges (which resemble wings in the beam's section) were shifted in relation to the beam axis and the trusses supported by the beams. Establecimento Merlo. The modified beam design was adopted for good after load-testing of a scale model at Turin Polytechnic University. Microfilms 350–353, FMZ MZ MIC 026a, Fondo Marco Zanuso, Archivio del Moderno, Mendrisio. See also, Establecimento Merlo.} The final beam configuration can be identified in plan drawings as early as July 1955, based on the details that characterized the later roof structure in plan: the double-T-shaped column footprint and the extension of the roof a few meters beyond the outer factory wall.[\textit{fig. 4.10}]

The emblematic component of the production unit, the duct-and-beam, made a first appearance in a drawing for an early scheme of the factory designed for Brazil, built at São Paulo. The drawing was a
sheet of annotated sketches for an early scheme of the São Paulo factory, dated Oct. 17, 1955. The duct, shown in the section and in a perspective view of the roof, was made of bent sheet metal according to the caption, and attached to the underside of one of the steel beams that support the roof. Zanuso's note reads: "Channel for the air conditioning—its effective section is around 0.75 sq. m.—made of sheet metal and absorbent antiacoustical materials."[fig. 4.11]

In the F.O.B., the air conditioning system would engage the grid of columns as intake vents. The result, at São Paulo as at Buenos Aires, was the complete assimilation into the building envelope of the air conditioning system, which might have been a bulky addition to the building. The kinship between these projects is underlined by their simultaneous development. The work floor organization was evidently finalized for both the F.O.A. and F.O.B. at the same time, in March, 1958.465[figs. 4.12 and 4.13] The informal shapes of the F.O.A. and F.O.B., which gave both factories an air of contingency, as if they might be traces of an ongoing process, reflect the tailoring of the buildings to the unstable "given" of the production sequence; but the provision of conditioned air guarantees a basic functional consistency.

By the mid-1960s, the "production unit" that was achieved at São Paulo and Buenos Aires, a new factory typology with a workshop area that would have power, lighting, and other services everywhere, had
been superseded in turn. The Scarmagno-Crema-Marcianise factory system was a further iteration of the factory building type, which was envisioned this time as a quickly-constructed building system amenable to the minute coordination of factory construction and product production. In his comments on this typological development, Zanuso characterized industrial architecture as the "coincidence" of planning and production, the planning of the building and the production of the object.

The condition of a productive process of an industrial nature consists prevalently in the coincidence of time and place in which all the operations of a conceptual (planning) and physical (execution) nature take place. This coincidence, or at any rate the close functional relationship between the two operations in both space and time makes it possible to minimize, or better, render practically non-existent, the time-gap between the two operations, enabling them to be carried out in a single process. In this condition the forecast ability of the productive operations can function outside the organizational scheme, in the sense that everything that is produced has been defined in every aspect prior to production.466

Thus, in this last building type, Zanuso sought an architecture whose modification would be as calculable as possible, to respond to fluctuations in production in close synchronization. The use of a light-weight roof structure made of replaceable aluminum and fiberglass elements, in the Scarmagno-Crema-Marcianise system, can be understood in this light. In his early comments he identified aluminum and stone as ideal materials for prefabrication, for its rapid

466 Zanuso, "Five factories," 73.
accessibility, its precise manipulability, and its amenability in a broad range of weather conditions.  

Design in Industry, Civility in Industrialization

Marco Zanuso’s factories for Olivetti were designed during a period of rapid expansion and wide recognition for the company. By 1952, a year before Adriano Olivetti approached Marco Zanuso to design the factory at Buenos Aires, Olivetti had outposts in Britain, Mexico, South Africa, and the United States.  

By 1960, Olivetti would dominate the American market and become a major shareholder in Underwood, the American typewriter manufacturer. But the firm’s embodiment of the term “multinational,” by this time, belies the prior decades in which it had expanded, and at the same time, pursued a program of public improvements in the region around its factory in Ivrea.

In 1952, the company earned a different kind of distinction: an exhibition on the Olivetti company at the Museum of Modern Art in New York. The museum show focused primarily on design, but by using the

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467 Marco Zanuso, "La casa prefabbricata 2: i materiali" Domus la casa dell'uomo 206 (Feb 1946): 31–33.

468 Already in 1933, Olivetti had outposts in Spain, Argentina, Holland, France, and Belgium, and it controlled half the typewriter market in Italy. Renzo Zorzi, Design Process Olivetti (Milan: Ing. C. Olivetti & C., 1983), 2.

term "integrated design" in notes to the exhibition, the curators referred to the quality of the company's various manifestations, including stationery, packaging, and architecture, as well as its nominal typewriters and adding machines. "It is the purpose of this exhibition and bulletin to encourage our industries in the battle for good integrated design by illustrating the excellence of the Olivetti program," they wrote.470

The curators' identification of the company's overall production, the "trademark to the world" embodied by its varied output, was a turning point in the development of industrial design as an area of collection and exhibition at the museum, which had begun with the exhibition "Machine Art" (in March, 1934) and had continued in exhibitions on inexpensive, "useful" objects, before and during the Second World War.471 Under these rubrics, the earliest shows on industrial design had asserted a separate aesthetics for machine-made things. Critics and curators maintained that machine-made objects could not be judged by the same standards as handmade art. The author of an essay on "Machine Art," published in the museum Bulletin in 1933, had expressed sympathy for William Morris, of the English Arts and Crafts movement, who had opposed machine manufacture based on the


471 In 1940, a separate department had been established for industrial design, headed by Eliot Noyes; in 1946, the museum held a competition for "organic design," which resulted in an exhibition of designs by the winner, Charles Eames. The early history of the department was summarized in the Bulletin. "Department of Industrial Design" Bulletin of the Museum of Modern Art 14:1 (1946).
poor quality of machine-made products; but the commentary faulted Morris for mistaking the inept use of the machine for an inherent limitation of the machine as such.\footnote{472}

Subsequent articles on this theme had sustained the view that machines carried with them a new aesthetic, that the best designs for machine-made objects were those that worked with the basic shapes created by machines. But apart from praising discrete examples, they stopped short of explaining that aesthetic in detail and presented their theme without an air of urgency, as they revisited the theme in 1934 and 1935.\footnote{473} Five years later, in the \textit{Bulletin} devoted to a show on "Useful Objects Under Ten Dollars" (1940), curator John Mc Andrews had restated the problem:

"Fine" art is that in which the intention of the artist is primarily aesthetic; this intention is usually conscious. "Applied" art is that in which the intention of the artist is to make handsome an object which is primarily a useful one. . . . Our "Useful Objects Under $10" are not examples of 'fine' art, and, in consequence, cannot be appraised in aesthetic terms only.\footnote{474}

The agenda had evolved during the War, as further shows on "useful objects" were followed by the formation of a separate

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\begin{itemize}
\item \footnote{472} "Machine Art." \textit{Bulletin of the Museum of Modern Art} 1:3 (1933): 2.
\item \footnote{473} For instance, in a review of Herbert Read's book \textit{Art and Industry}, curator Ernestine M. Fantl wrote as though his views were already accepted as self-evident "Although Mr. Read's crusade against the tyranny of the craft tradition over the machine product is well-fought, the machine esthetic has progressed beyond the need of such defense. As the craft tradition loses its hold on the machine product, the hand-made object begins to reflect the new esthetic of the machine." \textit{Bulletin of the Museum of Modern Art} 2:6-7 (Mar-Apr 1935).
\item \footnote{474} John Mc Andrew, "New Standards for Industrial Design" \textit{Bulletin of the Museum of Modern Art} 6:6 (Jan 1940): 5.
\end{itemize}
department of industrial design whose curators sponsored competitions on specific design problems, including an "organic" design aesthetic (1946); the design of a mass-producible chair (1949); and a series of shows titled "What is Good Design," beginning in 1950, which showcased the latest industrial products in the American market. (Marco Zanuso had participated in the 1949 chair competition; his design featured a collapsible frame of bent iron, with a fabric seat and accessories to hold drinks or shade the sitter from the sun.)

The Olivetti exhibition revived the theme of machine-made art, but the curators in 1952 suggested that the Olivetti machines were utilitarian objects that, in their estimation, did not demand a separate standard of judgment, but could be embraced as art in the ordinary sense. In notes to the exhibition in the museum Bulletin devoted to the Olivetti show, the authors pronounced of Nizzoli's Lexikon 80 typewriter, that it was "the most beautiful of the Olivetti machines," and in addition remarked, "The blank metal envelope in the hands of a sensitive designer has become a piece of sculpture."

On a symbolic level, the typewriter's outer shell and visible technical assembly gave the impression of an "artistic" exterior and "technical" interior. The observation that "the bones are engineered;

475 Zanuso's design, which received an honorable mention, is documented in the book on this competition. Edgar Kaufmann, (Jr.), Prize Designs for Modern Furniture from the International Competition for Low-cost Furniture Design (New York: Museum of Modern Art, 1950).

476 "Olivetti: Design in Industry," 11. (My emphasis.) The essay was signed "Architecture and Design Department."
the flesh is sculpted," made by an American reviewer of the Museum of Modern Art exhibition, indicates the effective communication of a neat distinction between the art and the technology, through the visual apprehension of the design.\textsuperscript{477} In reality, artists and technicians worked together on elements of both the inner assembly and the outer shell of the Lexikon 80. A flat typewriter key lever, inside the mechanical assembly, was cut from a flat plate; its smooth lines and curves, and that of other individual parts in the assembly, could well have been the work of an artist rather than a technician, so closely did they work in the design process.\textsuperscript{478}

The inclusion of architecture in the Bulletin may have been a reflection of the novelty for the museum of an exhibition on the work of a company, for the Olivetti exhibition was the first to feature a company that produced objects of industrial design. In the museum Bulletin dedicated to the first such show, devoted to the architecture firm Skidmore, Owings, and Merrill, in 1950, the curators had taken pains to downplay the commercial aspect, emphasizing that the architects in the company acted freely as individuals.\textsuperscript{479} Perhaps in a similar spirit, the Olivetti Bulletin began with a short biography of


\textsuperscript{478} See Mario Labò, \textit{L'aspetto estetico dell'opera sociale di Adriano Olivetti} (Milan: Görlich, 1957).

\textsuperscript{479} "They are able to work within their corporate framework because they understand and employ the vocabulary and grammar which developed from the esthetic conceptions of the twenties. They work together animated by two disciplines which they all share—the discipline of modern architecture and the discipline of American organizational methods." \textit{Skidmore, Owings, and Merrill.} \textit{Bulletin of the Museum of Modern Art} 18:1 (1950): 5.
Adriano Olivetti, and a characterization of two architecture projects, including the factory building and kindergarten designed by Luigi Figini and Gino Pollini and constructed during the 1940s. So that the products and graphic design work—which included books and displays by Marcello Nizzoli, Giovanni Pintori, and Leo Lionni—did not appear until page ten.

Meanwhile, through its presentation of architecture along with the product, the Bulletin transmits a message about the company in which the conjunction of art and technology is asserted and reiterated. The text describes the Ivrea headquarters, and details the architects' credentials as designers of homes and exhibitions. As a result, a pattern is apparent. Just as the "artistic" shell is presented in the object, with the "technical" interior, the architecture is presented as the artistic fruition the company's programs of planning, organization, and the distribution of amenities. In the history of the company, a "technical" agenda of production had preceded the operation of planning, and the engagement of architects; but the company had always been oriented to its workers and surrounding population, and Adriano Olivetti had steadily asserted this orientation in conjunction with the company's advances in production and design.

Adriano Olivetti, a theorist of production, society, and politics as well as an industrialist by occupation, had directed a process of industrialization in Ivrea according to his political and ethical sensibilities. Every instance of every form of design and planning was
approached in such a way that it would be a synecdoche for this social and productive program of the company, a material figure for the particular "industrial revolution" that was taking place at Ivrea. The company's orientation toward social ideals had first been established by Adriano Olivetti's father, Camillo Olivetti (1868-1943).

Camillo Olivetti had been educated as an engineer, and had become an entrepreneur; but he was also a socialist activist who, from his founding of the company in 1908, had approached his work in terms of what his company might offer to workers in the town, and by extension, to the inhabitants of the relatively depressed Ivrea area. Like other industrialists of his time, Camillo Olivetti had taken an interest in efficient production, but in keeping with his political

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480 Prosperous residents of Ivrea, in the late 1800s, regarded their town as a satellite of Turin, surrounded by agriculture, with the population in some rural areas surviving at subsistence levels. Bruno Caizzi, Camillo e Adriano Olivetti (Torino: Unione tipografico-editrice torinese, 1962), 1-12. Camillo Olivetti had been born in Ivrea. Following his education and travels abroad, immediately after his education, he had spent several years as an assistant to a professor of electrical engineering at Stanford, in California. In 1903, he founded a company that made measuring instruments, the C.G.S. (Centimetro Grammo Secondo), based in Milan. He returned to Ivrea in 1894 and founded "Ing. C. Olivetti & C.,” in 1908. In 1909, he made a study trip to Underwood at Hartford, Connecticut; he exhibited his own first typewriter at the Turin International Exhibition in 1911. Amerigo Restucci, "The Olivetti Dynasty," in "Summary" (English text), l'Architecture d'Aujourd'hui (188), LXI-LXII; Mario Labò, L'aspetto estetico dell'opera sociale di Adriano Olivetti (Milan: Görlich, 1957), 19.
convictions and religious beliefs, he also took note of production's social dimension.481

In his own version of the company mission, Adriano Olivetti continued his father's social-minded industrial practice, maintaining that the company's "vocation," an end beyond production, was to serve the Ivrea region.482 An example of his discourse on these themes, in his speeches and writings around 1950, is a passage from a speech called "Community Ideals," which was delivered to a conference on the theme of neighborhoods, in Berlin, in 1956.

Work, which should be a joy, for many is still a torment, . . . But whenever labour is performed, in the factories or in the fields, respect for human dignity and human personality must be maintained . . . . This is why the community factory will offer a solution, for it is conceived as a place ruled by justice and progress, where love and tolerance still may have meaning. A

481 Camillo Olivetti had come from a Jewish family that had arrived in the seventeenth century and prospered as farmers; his wife was a Waldensian who espoused that sect's commitment to simplicity and charity. Bruno Caizzi, Camillo e Adriano Olivetti, 1-12. In his editorials for a local newspaper he had established, near the turn of the century, Olivetti described social service as "the principal domain in which a rationalist solution could be effective." Amerigo Restucci, "The Olivetti Dynasty," in "Summary" (English text), l'Architecture d'Aujourd'hui 188 (1977): LXI.

482 "A question that I do not hesitate to define as one of the fundamental questions of my life, dramatically renewed in moments of uncertainty and of doubt... Can industry give itself ends? Are they to be found only in the index of profit? Or is there not, within the apparent rhythm, something more enchanting, an ideal substance, a destination, a vocation even in the life of the factory?" Adriano Olivetti, quoted in Valerio Ochetto, Adriano Olivetti (Milano: A. Mondadori, 1985), 111. The quote is from 1955. ("Una domanda che non esito a definire una delle domanidi fondamentali della mia vita, dramaticamente rinnovata nei momenti di incertezza e di dubbio... Può l'industria darsi dei fini? Si trovano questi fini semplicemente nell'indice dei profitti? O non vi è al di là del ritmo apparente, qualcosa di più affascinante, una trama ideale, una destinazione, una vocazione anche nella vita della fabbrica?")
factory thus conceived is a fitting instrument of tomorrow's civilization.\textsuperscript{483}

The concept of a "vocation," which preoccupied Adriano Olivetti, had also been a preoccupation for his brother, Massimo, who was head of the company during the Second World War.\textsuperscript{484}

The implications of Adriano Olivetti's view of society, and his attitude about industry's role in developing society toward an ideal form of state, can be traced in a series of writings, publications, and urban planning projects that he initiated in the years 1935-1949—a period that includes the months of his exile during the war and culminates in his permanent return to Ivrea in 1949, after which he

\textsuperscript{483} Adriano Olivetti, "Community Ideals" (Milano: Edizioni di Comunità, 1956), 19-20. Published as a pamphlet, the text was originally a speech delivered to "[T]he 7th conference of Settlements and Neighborhood Centers held in Berlin, July 20-August 2, 1956." In the first paragraph are distinct echoes of Simone Weil's writing in \textit{The Need for Roots} (not cited). An example of the form the Adriano Olivetti's social commitment had taken within the company is the "Burzio Fund," an assistance fund named in memory of an employee who had played a role in the company since the beginning, and whom Adriano Olivetti would often cite as a model worker. Adriano Olivetti, "Servizi e Assistenza sociale di Fabbrica," \textit{Urbanistica} 33 (1961): 74-79.

Describing the fund, Adriano Olivetti spoke of a worker's rights; "Social service has a function of solidarity. Each worker at the company contributes with his work to the life of the same company and at the same time to that of the organism in his breast, and can therefore have access to the assistance institution and request the relevant benefits without having this assume the aspect of a concession of a personal character on his behalf. . . ." (79)

ventured more deeply into the arena of politics within and outside the company.

The first project along these lines was the "Regional Plan for the Valle d'Aosta," a project developed in collaboration with an interdisciplinary team, including Renato Zveteremich, who was involved with Olivetti advertisement at the time; the engineer Italo Lauro; and the architects Piero Bottoni, Luigi Figini and Gino Pollini, and the firm of Banfi, Belgiojoso, Peressuti and Rogers (BBPR), whose design for a "corporative city" at Pavia, an unsuccessful competition entry, had been exhibited in Milan in 1932. The plan focused on the adjacent Valle d'Aosta province, to the north and west of Ivrea, which had several small towns along an old road into France, but had fallen to a state near economic inactivity. The proposals included the development of ski resorts in the Alps, to promote tourism in the northwest of the province; to improve roads and build power plants; and to annex Ivrea to the province and apply Olivetti activities to economic renewal, by redrawing the boundary between Valle d'Aosta and Piedmont. It was exhibited in Rome and presented to Mussolini, in 1937, but not implemented. Adriano Olivetti published the study as a book, in 1943.485

Adriano Olivetti's subsequent projects included the treatise he wrote while exile during World War II, *l'Ordine Politico della Comunità* (1943), in which the model for a federal state based on autonomous industrial "communities" is completely outlined; the establishment of the "Movimento Comunità" ("Community Movement"); the publishing house Edizioni di Comunità and the journal *Comunità*, in the mid-1940s; his involvement in the UNRRA-CASAS housing program, sponsored in part by the United Nations; his participation in the project "La Martella," to construct a village in Matera, in southern Italy; and his involvement with the INU ("National Institute of Urbanists").

The sensibility for "concreteness" in Adriano Olivetti's social philosophy helps to account for his particular approach to

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Adriano Olivetti founded Edizioni di Comunità, the publishing house, in 1943, to publish his Regional Plan for the Valle D'Aosta and his political treatise, *l'Ordine Politico della Comunità* ("The Political Order of the Community"). Later, the press printed pamphlets and books for his Community movement, in addition to Italian translations of a wide spectrum of world literature, with an emphasis on culture, sociology, city planning, and philosophy, in keeping with the response in literary and social science cultures to World War II and its aftermath. Among the titles were several works in contemporary Anglo-American thought on cities and technological development, including Lewis Mumford's *The Culture of Cities* (1953), *The Condition of Man* (1957), *In the Name of Sanity* (1959), *Art and Technics* (1961), and *The City in History* (1963); and writings of Erwin Anton Gutch, including *The Expanding Environment* (1955), *Architecture and Society* (1958), and *Community and Environment* (1960); this list is given by Paolo Scrivano, in "A Country Beyond its Borders: Foreign Influences and Infiltrations in Postwar Italian Architecture," 2G 15 (2000):12-17 (15). *Comunità* also published the *Federalist Papers*, in 1956.
architecture and planning as collective symbolic projects. The concept of the "concrete" recurs in his speeches and writings in the senses of something "tangible," "permanent," and "reliable"; it can be seen in a series of documents in which he explained the Community model on different occasions: his political treatise, L'Ordine politico delle comunità (1943); and the speeches "Community Ideals" (1956) and "Perché si Pianifica" (1956). A key occurrence is in his positing of the Community as a division within the state, in an aphorism at the start of his political treatise. "Neither the state nor the individual can realize the coming world by himself. Let a new fundamental act to recompose the unity of man be accepted and spiritually undertaken: the concrete Community." The new entity would be distinguished by originating from the land and its occupants, rather than imposed from above. In another occurrence, from his description of his hope for the Ivrea region, Olivetti implies that fraternity among men will follow from the recognition of common interests, a shared history, and the memory of childhood liberty.

The Community was supposed to have an "optimum" size; on this theme Olivetti cited Aristotle, who evokes similar biological

487 Adriano Olivetti, l'Ordine politico delle comunità. Le garanzie di libertà in uno stato socialista (1943), Edited by Renzo Zorzi (Milano: Edizioni di Comunità, 1970), 7. ("Né lo Stato né l'individuo possono da soli realizzare il mondo che nasce. Sia accettato e spiritualmente inteso un nuovo fondamento atto a ricomporre l'unità dell'uomo: la Comunità concreta.")

488 Ibid. "When the Community has life, the sons of man will find the essential element of love of his birthplace in the natural space of which he had the run during his infancy, and the concrete element of a human fraternity made of solidarity in the common sphere of tradition and vicissitudes."
analogies on the theme of ideal town size: "Towns, just like any other thing in the world, like animals, plants, instruments, must have an optimum size; because if they are either too big or too small, they cannot keep their strength, but will betray their natures or become corrupted." From this notion of a "concrete" political entity, Olivetti derived preconditions for the emergence of the Community: an ideally-sized territory; an administrative and communications network; and a plan for future development.

A corollary of Adriano Olivetti's focus on the ideally "concrete" community was his negative attitude toward the republican state, and toward political parties and labor unions beyond the regional scale. He maintained that large, centralized representative democracies and their corresponding municipal divisions were too abstract from the point of view of the individual. In such states, the citizen was asked to endorse or reject policies that would be abstractions to him; value would be placed on the act of choosing which to endorse, on what the citizen is "for" and "against," rather than on the relevance of a platform's content to an individual life. As a result, the individual would participate in a political life which might not concern him directly. His own needs would not be met by the means ostensibly provided by the system for this purpose—the party and trade union systems—and that means easily falls prey to special interests.


Accordingly, Olivetti intended for the "concreteness" of the Community to replace the "abstractness" of conventional political life. The "concrete" community was to be a social state that could be maintained by collective cooperation and management, given the limited scope of individual concern. The regional plan was an essential implement in that political scheme.\textsuperscript{491}

The city was a central metaphor for the collective, in Adriano Olivetti's theories. The intention of the "Community" was for the "city of man"—the contemporary metropolis—to more closely resemble the "city of God," a fraternal society along the lines of the ideal city described in the writings of St. Augustine.\textsuperscript{492} The constitution of the society that Adriano Olivetti called the "Community" was intended to aid in the reintegration of the individual. Adriano Olivetti's reference to the city, in querying the possibility of spiritual renewal in the face of the city, is analogous to similar thinking on the part of key critics that were involved in art and architecture culture in Milan during the 1930s, including Eduardo Persico and Alfonso Gatto, each of whom wrote critical essays for \textit{Casabella}, \textit{Italia Letteraria}, and engaged in other activities with the art and

\textsuperscript{491} See "Idea di una Comunità Concreta," in \textit{Società, Stato, comunità: per una economia e politica communitaria} (Milano: Edizioni di Comunità, 1952), 183. The text—also published as a pamphlet (Ivrea: Comitato centrale delle comunità, 1950)—is virtually identical to the first four chapters of \textit{L'Ordine Politico della Comunità}, and addresses the same theme as theme is also addressed in the speech "Community Ideals."

Architecture avant-garde during the 1930s; Persico, like Olivetti, initially approached the question from a religious perspective.493

Architecture and the city were also figures in appeals for social renewal by Massimo Bontempelli, Pietro Maria Bardi, and the other writers, critics, and artists involved with the journal Quadrante, a principal document of Rationalist architecture between 1933-1936. The founders of envisioned the development and critical interrogation of a form of architecture as a cultural project that would begin with their efforts in Milan and radiate to other cities across Italy.494 In the work of these writers, concurrent to the earliest manifestations of Rationalism, modern architecture was embraced for a clarity which was primarily associated with the "Novecento" in literature, and with

493 Persico was a founding editor of Casabella and Gatto, a poet, contributed a column to the journal beginning in 1937. See also, Persico's articles in Italia Letteraria, in various issues in 1933-1934. Giuseppe Lupo, in his analysis of Leonardo Sinigalli's writings in the context of avant-garde Milan in the 1930s, compares these three thinkers in their references to architecture as a point of reference in "interpreting the signs, the symbols, the orientations, and of proposing a model of alternative society." Giuseppe Lupo, Sinigalli e la cultura utopica degli anni trenta, 87. Lupo observes a religious theme in Persico's thinking, like that of Olivetti, citing an early essay in which Persico had written of the "city of men," a "too human" city that becomes corrupt; and an ideal alternative he called the "cubic city" ("città cubica"), as bright as a glass cube, in which the perception of existence was heightened. Lupo quotes from Persico's "La città degli uomini oggi" (Florence: Quattrini, 1923), 306. See also Giulia Veronesi, "Edoardo Persico," in Difficoltà politiche dell'architettura in Italia 1920-1940 (Milano: Libreria Editrice Politecnica Tamburini, 1953), 95-123.

artists such as the painter Giorgio De Chirico, within the complicated web of affiliations of the 1930s Milan art scene. (See Chapter 1.)

By the time Adriano Olivetti became head of the company, in 1938, he had guided the company through an increase in productivity, having developed and implemented a management structure, based on his research into contemporary models and his studies of the atmosphere in his father's factory. This research was formally documented in a journal *Tecnica ed Organizzazione* ("Technology and Organization"), established by Adriano Olivetti in 1937, to analyze the industrial organization in relation to considerations of production, such as the structure of industry; the technical requirements of the product; the organization of the company, the training of workers, and industrial architecture. The journal's subtitle, "nuove macchine, architettura industriale, assistenza sociale," implies the parity of new machines, industrial architecture, and social assistance as resources for production.495

In the ensuing decades, he would initiate a new regional plan, on a smaller scale than the Valle d'Aosta plan, focusing on Ivrea and the surrounding Canavese region. By 1952, his convictions about town planning had led him to study the Garden City and New Towns concepts, pursued in America and Europe during the first part of the century, and the modern city plans of Le Corbusier and others in Europe in the 1920s and 1930s. During the 1950s, he would implement these concepts in projects that ranged from roads and infrastructure to the

495 Caizzi, *Camillo e Adriano Olivetti*, 200.
construction of neighborhoods and housing for employees, near the headquarters at Ivrea, during the 1940s and 1950s.

The goals of the master plan, as summarized in the 1956 speech "Community Ideals," illustrate a combination of pragmatic details and moral values that reflects Olivetti's theory of the "Community." To organize the community so that it could function according to its goals, drawing on innovations in town planning, the proposals tend to a decentralized urbanistic scheme. Practical proposals included connection of the urban center and more remote areas by roads, and the coordination of their administration, to facilitate access to resources and to natural settings for residents in all areas; for agricultural activities to be maintained along with the development of industry; and for existing villages to be renovated through the attentions of architects. In addition, his criteria include references to spiritual value, proposing that "man can find a more harmonious and complete life both in his work and in his leisure"; that "the celebrated beauty of our old towns, glowing with renewed splendor, shall be a worthy nourishment for the spirit"; and that "if the sense of love and justice and the power of truth flourish, the real communities will be born." Closing his list, Olivetti underlined the duality in the plan, entailing the pragmatic and spiritual stipulations together; "This is the great task of modern town and

country planning which, however, cannot be achieved unless an adequate political and administrative transformation takes place."497

Before industrial development was initiated at Ivrea by Camillo Olivetti (and a handful of other entrepreneurs), the region's economy had been primarily agricultural, with some areas near a subsistence level of poverty.498 The growth of the Olivetti company contributed in large measure to the industrialization of the region, entailing changes in occupation from tasks associated with agriculture and artisanal manufacture, to those of light industrial manufacture. Ramifications of the Ivrea plan would include the construction of roads and workshops, and other measures that facilitated this transition. Its projects were literal enactments of change consequent to production. Adriano Olivetti and his collaborators, who came from various quarters of the avant-garde, would approach architecture in this light.

Olivetti's earliest architect collaborators were Luigi Figini and Gino Pollini, members of the Gruppo 7 of Rationalists, who had appealed in their manifestos and in their own work for an architecture that would suit the new building types associated with industry. When the Olivetti company was featured in the *Museum of Modern Art Bulletin*, in 1952, the factory and nursery school by Figini and Pollini were included alongside the posters, vitrine displays, and machines, and presented as buildings that played a communicative role.


498 Bruno Caizzi, *Camillo e Adriano Olivetti*, 1-12.
in the relationship between the company and the worker population. These projects had to do with Adriano Olivetti's conviction that the planning of buildings, and of the urbanizing area around Ivrea, could be a form of social planning. Architecture was engaged as a form of art that provided an interface between the inhabitant and worker, and the scientific and technical concepts of planning; and by extension, between the human community and the imminent culture of production.

This mediating role is indicated by the details of the architecture that were mentioned in the description of Ivrea in the Museum of Modern Art Bulletin, which stressed the provisions for comfort of the workers in the factory, and the deliberate display of locally-sourced stone in the walls of Figini and Pollini's nursery school.

**Civility, Publicity, and Product Design**

The Bulletin of the Museum of Modern Art, which served as a pamphlet for the 1952 exhibition on Olivetti, could have been mistaken for a publicity brochure. The crediting of Olivetti art director Leo Lionni as designer of the exhibition—and his cover design, a simple yellow "O" with the words "Olivetti: Design in Industry"—contribute to this impression. The presentation of the products and graphics

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500 For instance, the glass walls of the factory are "carefully planned to expedite production without sacrificing the comfort of employees"; in the nursery school, "A greenish gray stone from the Valle d'Aosta is used in random form for the retaining walls of the earth podium . . . . [the building's] exposed concrete frame is sheathed with a light gray stone from the same region." Ibid.
along with architecture recapitulated a basic pattern that was typical of Olivetti publicity: the product was presented with a narrative, inviting the observer to reflect on the artistic and technical aspects of the products, as well as their uses. The publicity program had developed in this way as Adriano Olivetti drew on the creative community in Milan and brought artists of various kinds into his company, to a point at which the artists and technicians worked side by side during the design process. As a result, while publicity developed as a means to communicate about the company, including its projects of public works at Ivrea, product design developed in the context of that publicity program. The particular format of the Lexikon 80 typewriter, which was compared to a sculpture in 1952, was a reflection of the demands of publicity and the condition of collaboration that evolved to meet those demands.

From 1938-1940, publicity was directed by the engineer Leonardo Sinisgalli. A precursor department had been directed by Renato Zveteremich; but Sinisgalli, who was also a poet, imposed a signature style that combined representations of the product with various kinds of narrative. This style remained in place during the 1950s, after Giovanni Pintori had succeeded Sinisgalli as publicity director. The arrangement in which the publicity department was integral to the company itself reflects the seriousness with which Adriano Olivetti had approached the problem. Camillo Olivetti's typewriter factory,

established at Ivrea in 1908, had been the first of its kind in Italy; but the achievement of his company was not to have introduced the typewriter to Italy, but rather, to have put the typewriter into production and established a market to sustain its production.\footnote{An early model of typewriter, resembling a model built by the American company Remington, had been patented in Italy in 1855, but it was not put into production. According to Mario Labò, in his history of the company's "social aspect," the businessmen in Italy would have been a natural market, but a convention of penmanship persisted to end of the nineteenth century. Ibid., 19.}

In Sinisgalli's program, the aims of publicity had been brought to bear on the concept of industrial design.\footnote{Ibid., 20-21.} This sequence of events, and the associated order of these areas of design, was primarily due to two circumstances. The first was the determination to create a "humanistic" publicity that would address the viewer gently, not aggressively. To this end, Sinisgalli emphasized the creation of narratives—sometimes on tangentially related themes—as a part of the presentation. The second was the involvement of artists and designers from the Milanese avant-garde, and the exchange of ideas between Olivetti culture and the commercial art avant garde that revolved around the firm Studio Boggeri and the journal \textit{Campo Grafico}, during the 1930s.

The significance of the narrative for the tone of publicity is a theme of an essay on Sinisgalli's first major campaign in his role at Olivetti, the campaign for the Studio 42 typewriter (1939). The writer Elio Vittorini praised Sinisgalli's insistence on a "civil" tone in
advertising, and contrasted his work with American advertising.\textsuperscript{504} In American advertising, Vittorini wrote, the method was conquest by "quantitative values," by "brute force."\textsuperscript{505} Instead, "one needs to render the quantitative fact qualitative. Man is quality. And if an act of force wants to be truly vital it must employ man in humanity, in quality. To this end, 'publicity-humanism' is spoken of in America."\textsuperscript{506}

"Humanism," for Vittorini, entailed that advertising should aim at communicating, not the bottom line, but "something else," namely,
"art." Citing Olivetti publicity, Vittorini observed that it had the same aim as any advertisement, but the creators of the image had focused on the "more immediate" goal, "to create images that will last in man and live in him." Vittorini added, "It is the highly ambitious goal of a poet, a painter. But if only art can achieve such quality—live, and endure, and win the commitment of man—publicity must be art."

Sinisgalli had developed his sense for the narrative of industry while working at the Società del Linoleum, where he first practiced publicity. Publicity, in that case, took the form of his tour of a circuit of provincial towns with a valise full of samples, like a traveling salesman. Meanwhile, he wrote poetry. His writings from

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507 Vittorini, "Una campagna pubblicitaria," 455. "The problem is for self-assertion to be something else, something qualitative and qualifying. It must have another reason for being in order not to exist as an end in itself instead of for man. And this reason can only be that for which the work of art exists: the reason of no reason, no target." ("Il problema è che sia affermazione essendo un'altro cosa, essendo duna cosa qualitativa, qualificandosi. Deve insomma avere un'altra ragione di esistere, che la faccia esistere di per se stessa innanzi all'uomo. E questa ragione non può essere che la ragione per cui esistono le opere d'arte: la ragione di nessuna ragione, di nessuna scopo.")

508 Ibid., 456. "[C]reare immagini che riuscissero a durare nell'uomo e vivere in lui. È lo stesso scopo altamente ambizioso di un poeta, di un pittore. Ma se solo l'arte può qualificare, e far durare, far vivere, ottenere l'impegno dell'uomo, la pubblicità deve essere arte."

509 The Società del Linoleum was a subsidiary of Pirelli, established in 1898. The salesman's itinerary ran from Narni to Mantua, Varese, and Pavia. Giuseppe Lupo, Sinisgalli e la cultura utopica degli anni trenta (Milan: Vita e Pensiero, 1996), 217. The company also published Edilizia Moderna, founded in 1929 to promote linoleum. Sinisgalli wrote several articles for the journal during his tenure. The Linoleum company, like Pirelli, its parent company, began as the imitative manufacture of materials in Italy, parallel to examples in other countries, to meet domestic demand and avoid customs taxes. "Linoleum, miracolo di Sanità" Linoleum—Pirelli. http://www.it.pirelli.com/web/group/history/storiadiversificati/linoleum/default.page# [Accessed December 29, 2010.]
the years 1936-1937, when he was employed by the Società, included descriptions of his experiences and reflections on industry and nature from this insider’s perspective. His visual sensibilities were tied to his literary activities. The Hermeticist school, to which he adhered, followed the developing art and architecture avant gardes, and applied concepts of art to works of literature, and vice versa, in their writings.510

Drawing on these experiences, Sinisgalli would emphasize the gesture of the artist who was aware of the pecuniary concerns of the advertisement, but detached from them (as Vittorini observed) and instead focused on narrative content about the company and the product. The approach had overtly rhetorical expressions, such as Sinisgalli's text for the 1939 promotional pamphlet Storia della Scrittura ("history of writing") that aspired to place the Olivetti typewriter in an ongoing process of human literary development. The telling of stories was also fundamental to the design of showroom

510 As examples of writings by poets about art, Giuseppe Lupo cites articles that appeared in the journal L'Italia Letteraria, a weekly paper that featured articles on art, literature, architecture, and various art forms. Contributors to this journal in 1933-1934 included poets like Quasimodo; as well as critics who would take part in Casabella in 1933, following the appointment of Eduardo Persico and Giuseppe Pagano as editors. A look beyond Lupo's examples, to other articles in that journal in the same period, reveals an article on the painter Cantatore (15 Dec., 1934), and a review of the V Triennale (June 1933), by Eduardo Persico; an article on CIAM by Ernesto Nathan Rogers (24 September 1933); and an article on the artist Lucio Fontana (24 November 1934) by Sinisgalli. In addition there are several articles by the painter Gillo Dorfles, including a review of a book on "enchantment and magic" by the medical historian Arturo Castiglioni (6 May 1934); and early writings on architecture: a discussion of the newly-built town of Sabaudia (22 April 1933); a review of Alberto Sartoris's book Gli elementi dell'architettura funzionale ("The elements of functional architecture"); and a review of the Regional Plan for Pavia, developed by the architects BBPR, which was passed over in the competition but exhibited at the Galleria del Milione (15 April 1934).
diplays as preeminent sites of communication in which the product was experienced. The typewriter was presented to the consumer through the work of Sinisgalli, Pintori, Nizzoli, and other Olivetti designers through graphic designs, in posters and print advertisements, in which elements of the showroom, from graphics to architecture, served to frame the typewriter as a pleasurable tool for personal cultural production.511

Sinisgalli’s approach to publicity was to combine narratives about the product and the company with poetic and visual imagery. Like the publicity tradition that had been established by Pirelli, during the late nineteenth century, the method was based on the staging of spectacles, seeking to attract the viewer’s attention rather than address him (or her) imperatively.512 The contributing artists were drawn from the culture surrounding the journal Campo Grafico and the

511 “In the designs we have mentioned there is always some architectural point. It may be a balcony supported by a flight of stairs, or a bench or counter leading towards a mirror which, by doubling its length, gives added space to the display of models. But the machines, rising to a peak, criss-crossed, or set upon some stand, are always the commanding feature.” Mario Labò, L’aspetto estetico dell’opera sociale di Adriano Olivetti, 21.

512 Founded in 1872, by the turn of the century, the rubber manufacturer was a producer of tires for velocipedes and bicycles, and eventually for automobiles and other engine-powered vehicles. But in its first decades, it produced a variety of products, including chimney linings and products for use in industry and sanitation. In 1884, Pirelli joined other companies as a sponsor of a power company; in 1887, it produced rubber-housed cables for electricity and, a few years later, for aerial telephone wires. Pirelli 1872-1972 (Milan: Scheiwiller, 1972), 11. Pirelli’s products included some that were part of everyday life and some that were remote from that sphere of experience. Accordingly, it presented itself and its products to the public by way of various spectacles. Around the turn of the century, the company sponsored a major annual bicycle race around Northern Italy. The race followed a loop from Milan to Cremona to Brescia, back to Milan, and eventually grew into the "Giro d'Italia" ("Tour of Italy"), a major international racing event.(13)
advertising firm Studio Boggeri, in which a graphic style had developed, focused on graphic design, printmaking, and advertising. Founded in 1933 by Antonio Boggeri, a conservatory-trained violinist who had turned to typography and modern graphic design, the studio was known for its signature aesthetic which combined photography, text, and graphics, in geometrically structured layouts featuring two-dimensional shapes and lines at right angles, reflecting the influence of printing at the Bauhaus, and of Constructivism and De Stijl. A key figure at Campo Grafico was Luigi Veronesi, who was an editor of the journal as well as an artist and photographer, a theorist of photography (see Chapter 2), and a sometime collaborator with Sinisgalli. 

The graphic practices of Studio Boggeri, and the group of designers that pursued similar work independently, aimed to activate the content of publicity through artistic interpretation. They regarded the advertising function as just one aspect of the work, and in fact a pretext for an aesthetic exercise. Design was conceived as


514 Campo Grafico documented contemporary graphic art and related movements in the art avant-garde, and published reflective essays on abstract art and the use of photography. Issues of the journal featured works by the Milanese painters Atanasio Soldati (later associated with the arte concreta, as was Veronesi) and Gino Chiringhelli; as well as features on Picasso and Friedrich Vordemberge-Gildewart, later a professor at the Hochschule für Gestaltung in Ulm, Germany, where "Visual Communication" was a special section in the Bauhaus-inspired industrial design school. Sinisgalli was an occasional contributor to Campo Grafico, and an issue in 1935 published an excerpt from his book, Quaderni di Geometria, co-authored with Veronesi.
visual communication in the most general sense. Studio Boggeri did not easily win commissions from industrialists, who tended to see graphic design as a superfluous addition to typography, and to invest minimally in advertising. However, Adriano Olivetti engaged Studio Boggeri, along with Xanty Schawinsky, Franco Albini, Erberto Carboni, and Figini and Pollini, at the 1931 Fiera Campionaria. Similarly, the activities of other artists, including such exhibitions and the journals of architecture, literature, and art, provided opportunities for designers to work and to develop their discourse on graphic art.

These circumstances helped to sustain the pursuit of advertising as a pure art form, above and beyond its commercial function, corresponding to Vittorini's characterization of publicity "humanism," as noted above. An article in Stile industria (1954), on the advertisements in daily newspapers, demonstrates that the perception

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515 Fossati and Sambonet, Lo Studio Boggeri, 2. ("Se per il pubblicitario l'impatto è concentrato sulla resa pratica dell'investimento, per il grafico la sfera di questo impatto è più larga e complessa, perché si pone su una base in cui il prodotto è fondamento di una ricerca (comunicazione) che tocca aspetti di formazione e di informazione più generali.")

516 Ibid., 3. ("La carente diffusione di una effettiva informazione del campo grafico pubblicitario, non maturava nel committente una presa di coscienza disponibile a un tale tipo di problema: l'incredulità, l'ironia e la diffidenza furono le risposte a quella offerta collaborazione che già di per sé complessa, era intesa come un superfluo doppione del mestiere, dell'attività soddisfatta da sempre dal tipografo.")

517 Mario Labò, L'aspetto estetico dell'opera sociale di Adriano Olivetti, 20.

518 The essay refers to an "osmosis" between graphic design and architecture culture during the 1930s. Lo studio Boggeri, 4. See also Giulia Veronesi's essay on Eduardo Persico, in Difficoltà politiche dell'architettura in Italia 1920-1940 (Milano: Libreria Editrice Politecnica Tamburini, 1953), 95-123.
of graphic art as an autonomous field of research persisted into the 1950s, in Milan. These (normally unrecognized) commercial artists displayed an "exquisite taste for 'black and white,'" a sense for "the gamut of tonal values," and an ability to take advantage of negative space as well as the printed figure. Pozzi's examples illustrate various techniques such as the exploitation of "gray" in fine print; the use of humor to catch the reader's attention; a style that resembles well-known examples, such as work of (animators) Fleischer or Disney. Of the artists listed, Erberto Carboni, Ezio Bonini, Franco Grignani, and Max Huber were at some point a part of Studio Boggeri. The impact of Studio Boggeri, and of the other artists and firms who entered the Italian advertising field after the War, can be traced in many examples.

A Physical Paradigm for the Industrial Product

A salient characteristic of the 1930s graphic arts culture, with respect to the role its artists would play in the publicity program of

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519 Giancarlo Pozzi, "Pubblicità sui quotidiani," Stile Industria 3 (1955): 48-58. "An art is involved, but an 'applied' art whose validity is subordinate with respect to its own limits, whose language comes from the awareness of its specific function in an extreme strictness of means"; there is a "necessity to presuppose an unpredictable place of the work" and "to convince with an economy of means"; the task is "not for the dilettante."

520 On Pino Tovaglia, see Massimo Pitis, Pino Tovaglia La regola che correge l'emozione (Mantova: Corraini, 2005). Another such artist was Max Huber (1919-1992), who arrived in Milan from Switzerland in the 1930s and was hired by Studio Boggeri. Huber later exhibited his work with the arte concreta and contributed to exhibition design at the VIII Triennale (1947). Stanislaus von Moos, Mara Campisana, Giampiero Bosoni, Max Huber (New York: Phaidon, 2006). Huber is also profiled in Stile Industria 3 (1954).
Olivetti, was its disposition to combine different kinds of media. This entailed the convergence of different kinds of art practice. The prevalent sensibility of abstract form in painting, photography, and architecture, was a premise of investigation in the 1930s, much as it would be for the arte concreta during the 1940s and 1950s. The incorporation of the photograph into the graphic work was a characteristic in the work of Studio Boggeri, during the 1930s. In issue 12 of Campo Grafico, which was devoted to the firm, Luigi Veronesi addressed the theme of photomontage. He argued that the photograph was made more precise when it was incorporated into a graphic composition by means of a correspondence between shape in the photograph and on the page, which would constrain its impression. The technique of photomontage, according to Veronesi, entailed choosing a photograph, or taking one, so that its forms would lend themselves to incorporation into the composition.

The Olivetti publicity regime established by Sinisgalli had evolved within a mixture of graphic arts, literary, and industrial cultures, all of them converging around the impagination of images, graphics, and stories in various forms of publicity. By the time of the Lexikon 80, released in 1947, product design had developed towards an aesthetic that was highly compatible with representation of the machine in photographs, as well as amenable to presentation to the consumer. In the Lexikon 80, the sweeping lines of its outer casing,

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521 Luigi Veronesi, "Del Fotomontaggio." Campo Grafico 12 (1934): 278.

522 Ibid.
which had caught the attention of the Museum of Modern Art curators, also lent itself to depiction in photographs, and other kinds of two-dimensional representations. The effect can be seen in a poster by Nizzoli, in which a few blocks of color evoked a songbird in a drawing whose dark lines were a diagram of the typewriter chassis. [fig. 4.16]

According to Mario Labò, the origin of the style exemplified in the Lexikon 80 lay in the collaboration of artists in the design from the very beginning of the design process. The M1 (1932) and the M42 (1938), were the first machines to be designed in this way. Early typewriter designs had shown some sensitivity to the mechanical nature of the machine: the M40 (1931), was given a more horizontal shape and enclosed sides, responding to the conditions of use and maintenance. But the style of those machines, including an ornamental lock on the case of the M40, had still recalled "a nineteenth-century heritage," even in the 1939 update of the same machine. Marcello Nizzoli had arrived at Olivetti in 1935, and from the beginning his task had been to produce "a type of body or casing that would not only suit [Olivetti’s] machines but symbolize them." Nizzoli's work on the "Summa," a calculator, had introduced him to company engineers as collaborators. With the aid of experiments in die casting, the team

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523 The M42 design was begun by Xanti Schawinsky and finished by the architects Luigi Figini and Gino Pollini. Mario Labò, L’aspetto estetico dell’opera sociale di Adriano Olivetti, 23.

524 Mario Labò, L’aspetto estetico dell’opera sociale di Adriano Olivetti, 23.

525 Ibid.
produced the first continuous case form, adhering to the company's standards for the rate of production.

Technical considerations meant that the case of the Lexikon 80, a larger machine, could not actually be cast in a single piece. However, the designer and technicians determined a suitable location for the joint, in a "neutral zone," according to Mario Labò's description, where it was advantageous from the point of view of maintenance. He observed that as a solution it was "proof that, so far from avoiding practical problems, industrial design, when intelligently directed, seeks them out, spars with them and even draws inspiration from them." 526

An image of a book cover design by Giovanni Pintori, which features overlaid photograms of an object that turns out to be a typewriter key, demonstrates how the artist and technicians could work within a common formal repertoire, the flat metal plate in the depicted pieces having been amenable to deliberate shaping, perhaps. Meanwhile, the use of the resulting shape to make a photogram demonstrates the ease in which the object could be developed into various kinds of artistic representation, yet remaining within the formal repertoire of contemporary graphic design. 527 [fig. 4.17]

The structure was based on a structural frame that held the components, covered by a sculpted outer shell. In the first issue of Stile industria, in 1954, this paradigm figured prominently. The outer shell

526 Labò, L'aspetto estetico dell'opera sociale di Adriano Olivetti, 23.
shell of the mass-produced product would be a preoccupation of the editorial, in which the architect Alberto Rosselli characterized the qualification of the outer shell of a stapler, in terms of form and function, as the quintessence of postwar design.\textsuperscript{528} In his editorial, Rosselli praises this scheme as an advance past the aesthetic of "Machine Art," which had embraced the machine only to affirm a machine aesthetic that was just as much an aesthetic figure as the traditional style that industrial manufacture was supposed to replace. By contrast, the \textit{carrozzeria} could be given the best shape from the point of view of the demands of grasping with the hand, or other factors; it had the flexibility to reconcile a variety of considerations that the contemporary designer was compelled to take into account.\textsuperscript{529}

The development of the typewriter body introduced sculptural qualities that gave artistic value to the industrial product, and expressed the distinctness of artistic and technical aspects, in a form that was easily comprehended. The symbolic dimension of the product was powerfully asserted by this aspect. The color of the case of the Lexikon 80, chosen by Nizzoli, was a part of the Olivetti brand


\textsuperscript{529} "The mechanism is enclosed in a light carrozzeria that protects it, the profile serves the hand that makes it work, the elements necessary for its function stand out in the simplicity of the complex. The technique in its primitive expression of the mechanical parts (as may be seen in the preceding example) seems here to be an obsolete experiment and furnishes an example of a concluded phenomenon in its limits of perfection and of a unity almost complete anyway." Ibid.
image. However, the salience of the Olivetti image was substantially due to the power of the object to convey both the artistic and technological commitments of the company, just as its architecture and planning suggested the acculturation of industrial production.

With the shell and enclosure visible as alternates, and the technical interior visible around the contours of the object, the object was constituted as a whole by the sort of effects that had been associated with Gestalt psychology (which had been a subject of theory during the 1920s and an inspiration to artists associated with the Bauhaus). Through the presentation of the product as a complex object of this kind, the collusion of art and technology was presented as an organizational and cultural subtext of the typewriter, just as it was echoed in subtle figures throughout Olivetti publicity. The bulletin from the 1952 show includes a statement by the art director at the time, Giovanni Pintori. "'[A] page or a poster must be rich in significance and . . . its meaning must derive from the inherent qualities of the object or the function to be publicized.'"532

530 The author of the essay in the Bulletin of the Museum of Modern Art remarked on Nizzoli's "insistence on that greyish-beige shade now known throughout the world as the 'Olivetti color.'""Olivetti: Design in Industry," 11-12.

531 An influential example through whose work the Milanese designers would have been familiar with the idea of form-giving or Gestaltung was Theo van Doesburg, who had used the term "gestalt" in his book Principles of Neoplastic Art, first published in 1925; see Theo Van Doesburg, Principles of Neoplastic Art with Introduction by Hans M. Wingler, Translated from the German by Janet Seligman (New York: New York Graphic Society, 1966). See Chapter 2.

Gillo Dorfles, in his 1971 portrait of Marco Zanuso as an industrial designer, referred to a series of his factories—including the factories for Olivetti—as industrial design projects. Specifically, he regarded Zanuso's industrial buildings as having been built up from small industrial designs. He described the ventilation system of the Factory for Olivetti at Buenos Aires, in its position as a part of the building, as a "design element inserted in the context of the building, but having, in a certain sense, an autonomous life." He compared the beam with integrated duct in Zanuso's factory for Necchi at Pavia to the Buenos Aires factory, in this respect. He added that in Zanuso's Olivetti factory at Scarmagno, the industrial design element was more extensive, covering the whole building.

The skylights (stamped in plexiglass and polyester, reinforced in a way as to obtain an adequate luminous diffusion and at the same time a good thermal isolation) are entirely conceived under the sign of seriality and industrialized and prefabricated design.

The resulting building "fabric" was, in itself, a "highly differentiated architectonic structure," much like an object of product design. From these observations, Dorfles concluded that these

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534 "[G]ià a partir dalla Fabbrica Olivetti Argentina di Buenos Aires (1955-1957), Zanuso abbia inteso l'urgenza di mettere a punto alcune singole strutture (in questo caso soprattutto l'impianto di condizionamento) come elementi di design inseriti nel contesto dell'edificio, ma avendo in certo senso, una vita autonoma." Ibid., 95.

535 Ibid. ("[I] lucernari (stampati in metacrilato e poliestere rinforzato in modo da ottenere una adeguata diffusione luminosa e insieme un buon isolamento termico) sono tutti concepiti sotto il segno della serialità e della progettazione industrializzata e prefabbricata.")
projects demonstrated "the intimacy of links between these two aspects of design."\textsuperscript{536}

That the factory buildings suggested to Dorfles a likeness to industrial products is evidence that they fulfilled Marco Zanuso's conception of the industrially produced building to date, and they extended it, the module lending itself to a structure that was "open" in the sense of being intrinsically changeable.\textsuperscript{537} As a type closely tailored to the expansion of Olivetti, the Scarmagno-Crema-Marcianise factory was embedded particularly deeply in the productive and economic processes of that particular organization. The internal position of the factories, within the Olivetti company, is reflected in their presence in publicity. As projects constructed in Italy, amid speculation about the company's future, these buildings were occasions for press releases and newspaper articles. Yet the buildings themselves had an unremarkable appearance, seen in photographs of the inside, or in drawings, or in aerial photos. They resembled each other closely. An internal publication from Olivetti announced two new

\textsuperscript{536} Gillo Dorfles, \textit{Marco Zanuso Designer}, 95. ("È . . . interessante notare come, proprio dall'incontro e dal confluire dei singoli componenti, si venga evidenziando una complessa 'tessitura' che costituisce di per sé una struttura architettonica altamente differenziata, ma non perciò diversa da quella che si può ottenere dall'assemblaggio di altrettanti elementi oggettuali nel caso di un consueto lavoro di 'product design.' Dimostrazione—se ce ne fosse bisogno—dell'intimità dei legami tra questi due aspetti della progettazione." Emphasis added.)

\textsuperscript{537} The literary concept of the "open work," developed by the theorist Umberto Eco, was described in his book \textit{Opera aperta: forma e indeterminazione nelle forme contemporanee} (Milan: Bompiani, 1962). Alberto Rosselli, would echo this concept when he argued for the industrial production of architecture in his 1974 monograph, "Open Space." Alberto Rosselli, \textit{Lo spazio aperto} (Cinisello Balsamo: Pizzi, 1974).
factories with nearly identical interior views.[fig. 4.18] This aesthetic register, in the Scarmagno-Crema-Marcianise factories, was different from the more spectacular one of the factories for Olivetti at Buenos Aires and São Paulo—the journal of an automobile club featured the factory at São Paulo as a destination for a tour of Brazil by car.\textsuperscript{538}[fig. 4.19] The difference may reflect a difference in the factories' position in the company's various narratives.

In at least two ways, the relationship between the design and production of the building, and the industrial product, can be made out with somewhat greater amplitude than in Dorfles's analogy. For one, in addition to the use of a module and the resulting serial and fabric-like character of the assembly, the buildings were articulated in such a way that the different functions were housed in parts of the building that were constructed in different ways—the work floor under the curved vaults and the office buildings in a more conventional concrete slab structure with flat roofs—so that the division of the program was reflected in this hybridity of the building volume. Roberto Guiducci, the sociologist and Olivetti project manager, offered this perspective on the building. A second line of comparison is the extent of similarity between the building volume and the outer shell or carrozzeria that was developed to such effect in Olivetti product design.

Roberto Guiducci described Zanuso's factory design in terms of the development of a distinctive architectural "language," a design "a
posteriori," in which the form was the outcome of a process and referred to that process. The elements of the "language" were parts of the program and function of the building, in Guiducci's view. He recommended the wider study of this method.

To design after having studied . . . listened and interpreted, after having analyzed . . . until finding the heart of the problem and the principal characterization, but at the same time keeping in view . . . all of the other secondary components . . . should be the normal practice of the architectonic "deed."

Guiducci added that "very few, I believe, would deny this rule, however subject it may be to exceptions." Nevertheless, he contrasted this method to an "a priori" approach which was more common: an architect "tends to produce ideas immediately as an envelope of the theme, to cover it, so to speak, with intentions elaborated in advance, to prepare from too far in advance." The a posteriori architect, as Guiducci called him, was as "fluent" in a received architectural terminology as his "apriorist" peers; but his attention would be drawn to details that would ordinarily be regarded as "extraneous," to take advantage of these for an "original" result, the outcome of more "flexibility" than design "a priori" could allow.

Design a posteriori "will depart every time from the formation of the

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540 Ibid., 20.

541 Ibid., 20.

542 The architect has "a lively capacity to analyze and decompose the theme into elements to introduce, in the basic vocabulary, that which is novel and original and specific, in this way enriching it with the new data offered by reality." Roberto Guiducci, "Una progettazione 'a posteriori': la fabbrica Olivetti di Marco Zanuso a Buenos Aires," 20.
vocabulary itself: to review it, to integrate it, to correct it, to amplify it."  

Further explaining the linguistic analogy, Guiducci wrote that, in the elaboration of the whole project from its basic terms, the "words" recovered or discovered in this process would be conjoined and combined to form the architectural "sentence." Sentences in architecture were relationships between these "composite words" ("parole-composte"): cycle-volume, structure-systems, planimetric elasticity (perimeter and boundaries, space), technical or psychological or social functions, etc. 

By "cycle-volume," Guidicci referred to the identification of a portion of the building with the production cycle. In fact, while Guiducci focused on the factory at Buenos Aires, the relationship was clearest in the factory at São Paulo, in which the offices were housed in a building with flat roofs and oblique-angled corners, while the array of domes and columns housed the work floor. [fig. 4.20] The "chapter" would be "...the organic and coherent articulation of these 'sentence relationships' ["frasi-rapporto"] into the complex scheme that will be the urbanistically and architectonically fulfilled work."  

Guiducci's judgment confirms the resolution, in the FOA, of the problem of a "new expressive language" that Zanuso himself had
identified as intrinsic to design in the industrial realm. At the same time, the method determined that the linguistic expression would closely correspond to the set of needs that were satisfied by the building. In other words, as the linguistic problem was solved, by the same token the building would become a tangible emblem of the fact of production, and of the manner of organizing an allocating space and resources, within the corporate culture of Olivetti. The result would be both an instrument and a symbol of this culture, a monument that possessed the quality of concrete relationships (as opposed to abstract relationships) that was characteristic of Adriano Olivetti's corporate policies and regional plan.

Zanuso's design of the factories at Buenos Aires and São Paulo, and his development of the two factories in parallel, are attributes of his own "concrete" method, analogous to the "social design" sensibilities of Adriano Olivetti at the scale of the plan and collective. In an account of his Lambda chair, Zanuso alluded to a habit of considering how one kind of project might yield insight into another. He remarked, "this problem of the joint-surface ["superfici di raccordo"] frequently presents itself in themes of architecture: the mode of transition between the roof surface and the pillar," citing the simultaneous work on the chair and the factory at São

546 "[T]he contact between the architect and the world of the machine and industrial production, is not so much a technical problem but first and foremost the conquest of a renovated morphology, indispensable complement to a new expressive language." Marco Zanuso, "Un’officina per la prefabbricazione" Casabella-continuità 199 (1953): 38.
As applied to the architecture, the sensibility of the "concrete" is reflected in Zanuso’s adaptation of the parts of his own previously-designed construction system to these new buildings.

Moreover, to the extent that the labor inside the factory involved the collaboration of specialists, in the assembly sequence, the building design team was analogous to the production team; similarly, the object produced by the architect and technicians, in its aspect as a work of art and a technical object, was analogous to those of the object produced by the team inside the building. In particular, one line of analogy between the factory building and the Olivetti industrial design product concerns the likeness of the concrete structure of the building to the outer shell, or carrozzeria of a typewriter such as the Lexikon 80.

If a drawing of the machinery layouts of the factory at Buenos Aires is overlaid onto a building plan, the interior has a solid appearance, reminiscent of the interior of a typewriter; and the building structure, all in reinforced concrete, resembles the typewriter shell or carrozzeria. Both building and typewriter consisted of an assembly that was a subject to technical constraints beyond the control of the designer (the mechanisms and plan), and a shell whose form was a mantle of artistic value. A further point of similarity is that the building structure in reinforced concrete was

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made by casting in pieces, analogous to the die casting of the typewriter shell. There is also an analogy between the two design processes. Zanuso's collaboration with technicians on the plan and construction of the building can be compared to Marcello Nizzoli's collaboration with the technicians on the design of the Lexikon 80. Writing on the F.O.B., in 1957, Roberto Guiducci described the architect as a member of a project team that was a double triangle: the architect worked with a construction engineer and industrial technician on one hand, and with a ventilation consultant and cost estimator on the other.548

In the Lexikon 80, the collaborative process seems to have enabled the team to solve certain kinds of problem. The Museum of Modern Art curators observed,

Many of the little levers and handles which one finds grouped at both ends of the carriage as an essential part of any typewriter and which are responsible for the bristling look of most models, are . . . ingeniously bound up with the larger body. By this means a look of order and simplicity is achieved.549

Gillo Dorfles explained the analogy between Zanuso's beam/duct and column/intake vent assemblies, and products, in terms of their determination as though the module was individual piece produced in


549 "Olivetti: Design in Industry," 15. Mario Labò, who quoted the passage in his 1957 study of Olivetti, added, alluding to the perception of American design excellence at the time, "and we may allow ourselves to add that he is writing in the America of 1952." L'aspetto estetico dell'opera sociale di Adriano Olivetti, 23. The Museum of Modern Art curators, for their part, considered the Italians to surpass American designers in the "integration" of their offerings; "The wish is there but as yet the leadership in integrated design remains Italian." "Olivetti: Design in Industry," 3.
series. By contrast, the redeeming factor observed in the Lexikon 80 resides in the capacity to solve problems of configuration.

The British critic Reyner Banham admired Zanuso's Olivetti factory at Buenos Aires for its resolution of the configuration of ventilation equipment and building structure. Banham allowed that Zanuso had the advantage of a remote location, for his factories; but praised the "frank and gratifying clarity" of the design, citing a "need to be able to see the difference between the structure . . . and the services," distinguishing the structure, which was "supposed to be permanent" from the services, which were "hoped to be transient," due to the obsolescence of the machinery. The extension of the canopy over the equipment, on various sides of the building, could be achieved in part because the reinforced concrete assembly could be cast in such a way as to lengthen the eave.

But Banham, who compared Zanuso's factory at Buenos Aires to Louis Kahn's Richards Memorial Laboratory in Philadelphia and Franco Albini's La Rinascente building in Rome, regarded the integration of building systems from the vantage point of a particular framing of the problem, maintaining at one point that building systems were a

550 "[T]here is always some structure cantilevering beyond the glass to shelter it, whether it be the fin on the side of a girder along a side wall, or the projection of the higher roof planes beyond the girder-ends on an end wall. Where such end-cantilevers occur, the upper planes are extended to join edge to edge, suppressing the monitors, to form a continuous canopy. This serves to keep sun and rain off the end wall and, more importantly, off the environmental mechanisms." Reyner Banham, The Architecture of the Well-Tempered Environment (London: Architectural Press, 1969), 241-242.

necessity that architects had to confront (circa 1969); and at another, that they were an opportunity for the appreciation of spectacles (circa 1984). By contrast, the design process of the Buenos Aires factory would have entailed suspending any such distinction between the so-called "technical" and "aesthetic" parts of the object, and instead treating them as a single integral system. The sheltering canopy of the factory would have been an act of composition, analogous to the achievement of "a look of order and simplicity" observed by the Museum of Modern Art curators in the Lexikon 80, the outcome of a collective compositional effort. The reinforced concrete building material would have lent itself to minute adjustments that brought the form and the technical apparatus into a deliberate-looking alignment, just like the casting of the metal case in the Lexikon 80.

In the comments cited at the beginning of this chapter, Marco Zanuso remarked on the problem of civilization and technology. With technological advancement evidently impinging on everyday life, architects were confronted not only with the adoption of new ways of producing buildings, and of working and living in and around them, but with the question of how technology could be cultivated. Zanuso

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552 See the two versions of the chapter "Exposed Power," in the first and second editions of The Architecture of the Well-Tempered Environment, respectively; in the latter version, Banham appends the Pompidou Center, by Renzo Piano and Richard Rogers, to his examples in the chapter.
rejected an overall policy toward technology, in which an absolute truth would ensure technology's absolute value; but he remained convinced of the role of culture in giving a social meaning to technology: an agreed-upon set of priorities might provide a manner of connecting technological means to shared values, and then architecture might fulfill its potential as an art form.

A substantial literature on the architecture and planning projects associated with Olivetti has examined the aborted realization of its Regional Plan for Ivrea from various perspectives, citing its varied architectural production, its utopian character as a social project, and other kinds of limitation, along with its progressive aspirations.553 Other scholars have considered Olivetti social planning as a corporate strategy. Giorgio Ciucci, for instance, observed that the Ivrea plan activities coincided with the public stock offering of the Olivetti company during the 1950s. His suggestion that "Industrial buildings were no longer the achievement of an architectural experiment, but of a formula," from that point onward, would account for the relatively utilitarian character of the Scarmagno, Crema, and Marcianise buildings.554


554 Giorgio Ciucci, "Ivrea, or the Community of Scholars," L'Architecture d'Aujourd'hui 188 (1977): LXIII.
Nevertheless, Zanuso's projects for Olivetti suggest that he found a communal atmosphere in the company, characterized by "common ends" which were available for use in the determination of how to apply technologies and integrate them into architectural form, if not in the interest of "social fruition," in a sense that went beyond the workers in these factories, then at least for the development of symbols that were meaningful to that particular corporate collective.555

In product design, Olivetti had developed a paradigm of the object in which the juxtaposition of putatively "artistic" and "technical" elements communicated a message about the nature of the knowledge and labor involved in production. Meanwhile, the products were made by an actual collaboration that resulted in moments of configuration in the design in which functional and aesthetic properties were made to coincide. Zanuso's factories, produced by an analogous process, were buildings with similarly expressive moments of integration and configuration. In this respect, they advanced his project of the industrialization of architecture in the direction of the acculturation of technologies. As factories, they were industrial architecture; as structures from prefabricated parts, they were industrialized architecture; and as objects, they were closely related to the industrial product.

555 The quoted phrases are from Roberto Guiducci, "Dall'industrial design al social design," 41; 36-37.
This study was motivated by questions about Marco Zanuso's relationship to modern architecture, and in particular, about how his apprehension of an industrial design practice enabled him to bring the logics of mass production to his architecture. The projects considered cross a spectrum from the building types of an agrarian society to the dwelling and workplace in an industrial society—and from traditional architectural design and construction to modular design for mass production. The chapters of this study describe how Zanuso's response to the Italian Rationalist ideal of a contemporary Italian architecture, and to other intentions along the way, determined his goals, while his experiences in industrial design assisted him in responding to these imperatives with an architecture that was expressive of the postwar-industrial moment.

By investigating the circumstances of his early forays into industrialized architecture, the chapters have provided a more complete view of Zanuso's modernist inheritance and its complications in the postwar period. A first observation was that Zanuso's advocacy of prefabricated architecture, evident in his 1946 articles co-authored with Paolo Chessa, is consistent with the agenda announced by the Italian Rationalists, in their 1926 manifesto "Architettura," which called for a form of architecture that would reflect the technical capacities of the present moment. A review of Zanuso's earliest projects, including the Arengario (1936) and Sacrario dei
Caduti (1938) confirmed the influence of this appeal for contemporaneity and clarity, as well as material sensibilities of Italian modern architecture. However, my review of Zanuso's Villa Scotti (1946-1947) and other house projects from the 1940s designed with Gianni Albricci, showed that the Rationalist theme in his work was soon inflected by the attraction of mass production and by a focus on project types that were newly important to Zanuso, and to other architects in Milan, with the arrival of the democratic, free-market society of postwar Italy. Their anticipation of the single-family home as a model for housing that would soon be widely-available in Italy (where the apartment house was the norm) was an occasion for research and for Zanuso's first published designs.

Zanuso's attitude to industrialization and the industrial product was further explored in Chapter 2, which established his contact with modern art, as well as modern architecture, as an influence on his evolving conception of industrial production. The analysis of the apartment building on the Viale Gorizia (1951) the Linoleum Showroom (1952), and other projects revealed Zanuso's association with painters of the Italian Movimento Arte Concreta and the influence of Max Bill on the Milanese industrial design culture. The discussion of Zanuso's views circa 1960, in Chapter 3, assessed the apartment buildings on the Via Laveno (1963) and Via Solaroli (1965) as realizations of the prefabrication production model he had first presented in 1946; and considered his own apartment renovation, published in 1962, as an example of his approach to interior design. In addition, the chapter
took note of his capacity to intervene at the scene of production, collaborating with engineers, fabricators, and manufacturing technicians.

Zanuso's factories for Olivetti, discussed in Chapter 4, were considered as his most ambitious projects, in aesthetic and technical terms, and—like the mass-produced housing on the Via Laveno and Via Solaroli—as achievements of an architecture based on serial manufacture. Noting that Adriano Olivetti had collaborated with Rationalist architects during the 1930s, the chapter sketched the modernization program (including the master plan for the Ivrea region) that was part of his communitarian ideal for industrial society, and constituted a framework for the architectural project. It was observed that, in the ambit of Olivetti, there was a cultural model that emphasized the collaboration of artists and technicians, and the minute application of architecture and design to routines of living and working. Whereas consideration of the series of projects in previous chapters established Zanuso's espousal of the Rationalist ideal of a contemporary architecture for a modern society, Chapter 4 focused on examples in which architecture had an actual progressive social structure to serve.

These investigations document the ethos of the architect absorbed by Zanuso during the 1930s, and his various advances toward its implementation after the War. However, in the same chapters there are indications that, in the grand scheme of postwar Italy, the progressive impact of Zanuso and other architects was relatively
slight, compared to their ambitions to shape the public experience through production. While the principal concern of the chapters has been to show the emergence of an industrialized architecture among Zanuso's projects, the review of his press-clippings file, in Chapter 3, showed that the architect's activities had a second life within the information economy of postwar Italy, and that in this public aspect, his mass-produced products (and those of other architects and designers) were represented in terms that were simpler, and with more diffuse claims, than in their representation by the architects. This kind of discrepancy was not lost on contemporary critics of architecture and of the architect-designer. For the remainder of this concluding essay, I would like to briefly dwell on the significance of Zanuso's particular manner of integration of design and architecture, for his confrontation of problems that had not been known before the Second World War.

A perennial theme in postwar criticism, including those writings on the "Second Generation," considered in the introduction to this study, was the relative blindness of modern architecture to speculative building and consumerism in their postwar forms. Design was not only closer than architecture to production, it was also more tightly associated with these commercial realms. As an architect and industrial designer, Zanuso exemplified the class of architect that the authors had in mind (although he was often invoked as a positive example in those critiques). The forms of publicity and advertising he participated in, and the Milanese furniture entrepreneurs he
collaborated with, considered in Chapter 3, belonged to a commercial culture in which design objects were eventually divested of any progressive intention and suspended in the economic framework that focused on enticement and selling, and substituted superficial traits for design quality—just as the building designs of architects for Milan were reproduced in superficial imitations by developers acting without architects in the commercial realm. As a pioneer in mass-produced furniture, Zanuso set an example for producers who adopted his designs as points of reference for more profitable productions. Pietro Busnelli of the furniture maker C&B—a collaborator with Zanuso on the Lombrico seating unit, in the late 1960s—admitted to using the "Lady" chair as a model (see Chapter 3); undoubtedly it served less scrupulous imitators as well.

A few critics took consumerism very seriously. Among critics considered here, Gillo Dorfles made an early approach to the theme of symbols and signs in his 1962 book, Simbolo, comunicazione, consumo ("Symbol, communication, consumer goods") (Torino: Einaudi, 1962). His acute observations extended an interest in anthropological studies, on which he had first written publicly during the 1930s.\textsuperscript{556} Manfredo Tafuri, who would use psychoanalysis as a lever with which to gain a critical perspective on architecture and design, understood the inherent irrationality of postwar capitalistic society, and his views

\textsuperscript{556} An early example was his review of a book on "enchantment and magic," by the medical historian Arturo Castiglioni. Gillo Dorfles, "Castiglioni fra Incantesimo e Magie" Italia letteraria v. 7, Sunday, May 6, 1934, p. 1.
were widely received as strongly pessimistic, especially in the international context.557 Paolo Portoghesi, in his sketch of the "architectonic condition" in Milan, alluded to the "mystifying fog of the 'product' that, in its common appeal, indicates an illusory moment of convergence between exploiters and exploited."558

But in general, the force of consumerism as a system with no apparent author, that could impose its values on society, seems to have been underestimated. The Italian design community, who developed designs for the Italian market in the early 1960s, were wary of the American system but remained confident that Italy would develop its own distinctive form of consumer market that might be different. No one seems to have accepted that consumerism might be governed by a system in which their products could never be competitive.559

My review of Zanuso's circle, including the other architects, theorists, and architects involved with Stile industria, in the same chapter, suggests that their projections and proposals took for granted an "industrial" life cycle for the object, involving objects of production in paths of creation, distribution, and maintenance, as durable possessions. Not only the product, but an entire order of labor and consumption is implied by this picture. In fact, in various

557 For example, Tafuri's views were influential in the U.S., where his critiques appeared in English translation beginning in the early 1970s, in *Oppositions*.


559 By contrast, the French theorists Roland Barthes and Jean Baudrillard, studied consumerism as a system during the same decade.
countries industrialization had been followed by "tertiarization," the ramification of economic activity by the emergence of services to assist industrial processes. Italy was no exception. If the industrialization of Italy was marked by its entrance into the Common Market before 1960—along with Germany, France, and other countries where industrialization had taken place decades before the War—the "tertiarization" of Italy, by 1980, was just as dramatic. The advent of the service economy—expansion until the numbers of people occupied in industry tapered off while the number employed in services became the greater part of economic activity—meant the rise of trading in raw materials, logistics, and other activities ancillary to industrial production, and corresponded to the change of sensibilities that was wrought by consumer culture.\textsuperscript{560}

A second important claim that had emerged in the criticism of Italian architecture and design, by the late 1960s, had to do with architecture and decorative arts. Reyner Banham, in his notorious critique of Italian postwar architecture, expressed suspicions about the apparent revival of Liberty, the Italian Art Nouveau, in 1959. He conceded that revivals might be justified if architects found themselves in circumstances similar to those of the past; but he regarded the Art Nouveau as a style that belonged to a pre-modern time. By extension, its revival was another attempt to hide from the present.

Art Nouveau died of a cultural revolution that seems absolutely irreversible: the domestic revolution that began with electric cookers, vacuum cleaners, the telephone, the gramophone, and all those other mechanized aids to gracious living that are still invading the home, and have permanently altered the nature of domestic life and the meaning of domestic architecture.561

Banham objected to the use of forms with symbolic content, not only as alternatives to the modern version, but often to mask a construction that was actually modern. One of his examples was a building on which a "dummy pitched roof" on its façade served to hide its modern, flat one. In other examples, Banham objected to curved flourishes on balcony openings and to the use of stained glass and giant chandeliers in the interior.562

Banham was not alone in regarding the Art Nouveau as a style that attempted to escape from present realities. The style was a case in point for the early 20th-century German critic Walter Benjamin, and is mentioned in a short essay about the bourgeois interior. Benjamin described the interior as a place of mythical isolation, citing its characteristics in late 18th-century France, when the "private man" emerged as a social type. He wrote, "[F]or the private man, [the interior] represents the universe. In the interior, he brings together the far away and the long ago. His living room is a box in the theater

561 Reyner Banham, "Neoliberty the Italian Retreat from Modern Architecture" Architectural Review 125 (Apr 1959): 235. He also remarked, "To revive [Liberty] is . . . to abdicate from the Twentieth Century—which may have purely personal attractions, like going to live on a desert island, but it is no help to one's fellow-men, and architecture, for better or worse, concerns one's fellow-men." Ibid.

562 Ibid., 233-234.
Benjamin placed particular emphasis on the use of ornament in Art Nouveau (which he called by its German name, "Jugendstil").

[Jugendstil] represents the last attempted sortie of an art besieged in its ivory tower by technology. This attempt mobilizes all the reserves of inwardness. They find their expression in the mediumistic language of the line, in the flower as symbol of a naked vegetal nature confronted by the technologically armed world.

Thus, what was at stake in the Art Nouveau was not only a conservatism about the appearance of things but also an attachment to social forms that belonged to an era before the acceleration of movement and communication, and other changes that were brought by modernization.

Zanuso was not implicated by Banham's critique of Neoliberty, but the critique entails a fundamental claim that transcends the particular case. The problem has to do with the relationship of architectural style to reality: did it reflect the contribution of the mode of production to the circumstances of everyday life? Or did it hide them? In this respect, Banham's interrogation of Italian modern architecture raised the question of whether, and how, the modern-architecture agenda had continued. I argued in Chapter 4 that Zanuso’s projects for Olivetti made especially explicit claims for architecture and design as a frame for the relationship between society and its

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564 Ibid.
industrial technologies, mirroring the corporate culture that made
ostensible partners of art and technology, architecture and nature,
and other opposites. However, critics have pointed out that the
corporate domain of Olivetti constituted a world unto itself. Olivetti
may have provided a protective context for architecture and design,
but its effects were at their maximum pitch only within the precincts
of its own corporate campuses.

Manfredo Tafuri, in an essay on Olivetti, credited the
corporation for its internal structure but cited the failure of its
model to be adopted on the wider scale that would have vindicated its
architects' contributions as widely applicable solutions.
Specifically, Tafuri wrote, "'Good form' was supposed to settle every
difference, to demonstrate that 'another life' awaited whoever entered
the koiné engendered by relations of production in which capital and
work had adopted new forms of exchange"; and he referred to the
fraternity of Olivetti collaborators as one of a few "golden cages
from which it was difficult to escape."\footnote{Manfredo Tafuri, "Aufklärung I: Adriano Olivetti and the Communitas of the Intellect" in \textit{History of Italian Architecture 1944-1985} (Cambridge: MIT Press, 1989), 37.}

The strength of the corporate image was widely recognized as a
"brilliant public-relations campaign" as Reyner Banham pronounced it,
suggesting that the fate of modern architecture in Italy rested
sustantially with this one company.\footnote{Banham, "Neoliberty: the Italian Retreat from Modern Architecture," 232.}
exhibition on Olivetti, emphasized "the organization of all the visual aspects of an industry, under a single high standard of taste." By means of control over color, form, text, and a consistent "integration of parts" in various kinds of products, Olivetti had achieved a "trademark." But Tafuri implied that design was, in effect, a kind of "gilding" on capitalistic enterprise in general. Among Marco Zanuso's industrialist partners, not only Olivetti but also Ezio Longhi and Pietro Busnelli, and Brionvega and Necchi (whose collaborations with Zanuso are not included in this study), could be similarly characterized as cells of collaborative idealism.

Zanuso's projects for Olivetti seem to occupy the sort of atmosphere that is presupposed by all of his projects: a social realm with compatible social, political, and work force organizations, whose members feel a sense of ownership for their labor and their possessions. (To what extent this was actually the common perception inside Olivetti is a topic that merits further investigation.) In effect, Tafuri's claims about Olivetti are analogous to the claims that were made about the bourgeois interior: it was a retreat, and while it was much larger than a living room, relative to the unbounded aspirations of modern architecture the corporate empire, in its way, the Olivetti campus may well have been "a box in the theater of the world." By analogy, the projects for Olivetti by Zanuso and other architects—and the plans for quarters and region to which they

belonged—represented the development of a bourgeois "interior" at the scale of the landscape. To the extent that Zanuso's architecture of production begs for such a condition to reach its full cultural potential, it can be interpreted as an elaborate bourgeois style, different from the Art Nouveau in appearance and constructive transparency, but carrying its own implicit, in some sense comforting messages.

Zanuso was uncomfortable with the term "style." In comments on the responsibility of the architect, Zanuso explicitly expressed distaste for the word, preferring "method." The comments appeared in an article in *Stile industria* in which Zanuso and other architects responded to Reyner Banham's essay "Design by Choice," in which Banham argued against the practice of industrial design by architects. As an alternative, Banham had pointed to Le Corbusier's interior in the Pavillion de L'Esprit Nouveau (1928), in which the architect had designed storage units and other architectural elements around a selection of furnishings that were already available in department stores. "[T]he whole operation was a triumph of disciplined and adventurous selection from what was at hand," Banham wrote.568 Zanuso responded that the design pieces used Le Corbusier were not separate from architecture culture; on the contrary, they already reflected the insights of the Bauhaus; "What is the effective 'style' (I say the method) attained in the 'Pavilion de l'Esprit Nouveau,' if not the

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method of industrial design, that is, the method of the modern movement, the Bauhaus?"\textsuperscript{569}

Taking the slippage between "style" and "method" as a conceptual frame through which to situate Zanuso's attitude to design, architecture, and production, in relation to contemporary critiques, I will argue that in Zanuso, his "method" is an important part of his significance. The coherency of his work is partly due to those formal attributes that serve to give his designs an aesthetic coherency, although these are not so mannered that one can easily single out an unidentified object as the work of Zanuso, as one could with other designers. The greater contribution of Zanuso is his demonstration of a particular attitude to the scope and foundations of the architect's social role—the "responsibility" of the architect. This attitude is rooted in the relationship of his work to contemporary production, and in his method of observation and decision-making in that realm, rather than his "style," in the sense of a figural signature.

First, it is useful to first consider some basic traits of Zanuso's style, in the sense of the rhetoric or syntax of parts and shapes in his projects. A first characteristic is his tendency to create an architectural project by way of the multiplication of basic units, whether these are construction modules or smaller volumes of identical dimensions. As noted in Chapter 3, a common theme in Carlo Zanuso, Manuscript of letter dated 1 February 1962. FMZ MZ CON 003 16. FMZAMM.
L. Ragghianti's 1960 survey of the contemporary art scene, in which Zanuso's work appeared, was the use of the multiplied identical unit in architecture, sculpture, and the decorative arts. The projects by which Zanuso is represented—his Kindergarten at Gubbio (1958-1959) and Factory for Olivetti at Buenos Aires (under construction at the time)—illustrate his application of the multiple in ordinary masonry-wall construction, as well as in more structurally advanced buildings.

Another trait of Zanuso's building and object designs is that each project tends to exhibit explicit various relationships of part to whole, not only in terms of the aggregation of the larger object from the basic unit but also in the use of the object to assert the assimilation of various systems and scales of perception. This is done by a hierarchical organization—for instance, in the Factory for Olivetti at Buenos Aires, the column/beam/roof assembly in reinforced concrete, which is uniform over the work floor, is differentiated by different patterns of wood-and-glass partition walls around the perimeter. Other formal means employed include symmetry, and simple shapes and patterns, such as the square and checkerboard. Meanwhile, the inerlacing of architectural and mechanical systems—as in the ventilation units that are visible under the eaves, in the same project—displays the mechanism but allows the formal and technical aspects of the object to be perceived as distinct from one another.

Zanuso can be assimilated to the broader liberal attitude toward the decorative arts, among Milanese architects and the interpreters of their work, by reference to these compositional strategies. Reyner
Banham, in his critique of Neoliberty in 1959, was dismayed to be able to could from a letter in which Gillo Dorfles had written, "'[T]he future in architecture, as much as in design generally, lies more in a stylistic continuation of the Art Nouveau than in the Bauhaus-style.'"\textsuperscript{570} Zanuso seems to have held the Bauhaus in higher regard; at any rate, the exhibition "Selected Examples of Italian Industrial Design," curated by Zanuso in 1955, included vases and textiles as well as motorcycles and automobile dashboards, as noted in Chapter 2.

The association of Italian design and architecture with the decorative arts elicited some positive responses from abroad. The Russian art historian Larissa Zhadova, who interviewed Zanuso in his studio for a Soviet design journal, observed that the involvement of architects in industrial design brought aesthetic quality to design at different scales. "One of the undoubted reasons for the successful development of sculptural-functional trends in Italian design is the relatively preserved unity of artistic culture, apparent in particular in the fact that almost all the leading designers are simultaneously architects, artists, sculptors, and masters of decorative applied art," she wrote, in 1969.\textsuperscript{571} The use of symmetry as a compositional strategy is partly the basis of integration of the ventilation system

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\textsuperscript{570} Banham "Neoliberty the Italian Retreat from Modern Architecture," 235.
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\textsuperscript{571} In the same passage, Zhadova wondered, "Is this not the basis of the plastic originality of form making, and the inventiveness in the searches for functionally new types of objects, of modernization and perfection of the old, that is so obvious in the works of Zanuso?" Zhadova, Larissa. "Italian Sculptural Design (Marco Zanuso)," Decorative Art USSR Monthly Journal of the Union of Artists USSR 1:134 (1969): 37. Translated from Russian by Allison Blakely.
\end{flushright}
into the architectural whole in Zanuso's Factory for Olivetti at Buenos Aires, which Reyner Banham praised as an example of the "tempering" of technology.\textsuperscript{572}

But while Zanuso's designs for buildings and objects may be characterized by symmetry, the square and circle, and other compositional strategies of applied art, they generally lacked ornament. More often, the expressive attitude of his buildings was derived from the evidence of structure and enclosure, the disposition of spaces, the creation of large unobstructed spaces or provision of storage, and occasionally, the use of colored surfaces, emphasized lines, and patterns in surface finishes. An early indication of this order of values is the \textit{Arengario}—his student project for Milan's Piazza Duomo, considered in Chapter 1—in which the meaning of the project derived from the visual relationships achieved as well as the materials and construction assembly that made them possible.

Eugenio Gentili's account of Zanuso's approach to interior design, in the 1962 article on the Zanuso family apartment (discussed in Chapter 3) is perhaps the strongest indication of an attitude unlike the use of the interior as a sanctuary from modern life. Recognizing changes in living patterns, the architect should conduct a survey, taking into account "subjective" considerations but also the "the introduction of new materials and new techniques" to determine the possible uses of each item. The emphasis was on utility, but not

as an absolute; utility was related to present needs. Those needs, meanwhile, were not simply assumed but determined—and here Gentili used the term "maieutica," referring to a Socratic exercise that aims at bringing hidden assumptions to light. The result was an organizational framework, based on needs, which conferred on each object a new value of its use in that context.

Another way to describe this method is to say Zanuso emphasized the syntactical relationships among the components of the object—or among a collection of objects—over the figural elaboration of their details or massing. The syntax was not fixed in advance but developed in relation to the needs of the client. However, Zanuso did not suppress the other kinds of content. Suspended in the framework of their use in the apartment, the family heirloom or prototype mass-producible chair could exude its aura of sentimentality or machinery within the identity conferred by its use. It would not be stripped of that other content entirely; accordingly, the resulting design would be likely to draw the observer into a meditation on the variety of qualities. An analogous claim can be made out for his objects and buildings in which the combination of technical assembly and sculptural form is most evident. Like the "duck/rabbit" and other images with the property called "multistability," in Gestalt psychology, Zanuso's objects resist reduction to either sculpture or machine. Their imagery transcends the "merely functional," but also withholds the reassurances of decoration.

Gentili's account of Zanuso's approach to the design of an
apartment interior, and Guiducci's description of Zanuso's Olivetti factory designs as architectural design "a posteriori," in Chapter 4, illuminate the significance of "method," as well as the compositional aspects of his objects, in Zanuso's industrial design work at the object and the building scale. "Style," in the sense of the object's visibly consistent organization and aesthetic qualification, develops in the context of a broader framework of decisions.

One aspect of Zanuso's style-as-method is a kind of naturalism, in his architecture as well as his design projects: a sensibility for confronting and classifying new techniques, meanwhile maintaining a grip on preexisting conditions and methods so that the opposites could be blended—new and old, organic and man-made. Guido Canella, in his 1962 profile of Zanuso, wrote that the professional and personal aspects of the man were difficult to separate; Zanuso approached even his technical tasks in a way that was "subjective."573

Canella returned to this theme at another point in his essay, writing that Zanuso possessed "an air of knowledge, confident and

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573 Guido Canella, "Zanuso il più problematico degli architetti italiani," Fantasia la rivista della Donna (Nov 1963): 62. "To speak of Marco Zanuso (in whom the work of architect and designer overlap and are confused with his personality, in such a way as to make him truly a person of his time) is to run the risk of being imprecise just when one wants to rigorously isolate the technical and ideological terms of a profession—the objective data— from their practical, and therefore subjective, implementation; two phases that, typically for Zanuso, constitute an organic, self-coherent whole." ["A parlare di Marco Zanuso (dove la sua opera di architetto e di designer si sovrappone e si confonde con la sua personalità, col modo stesso di proporsi legittimamente personaggio del proprio tempo), si corre il rischio di essere imprecisi proprio là dove si cerca di isolare con rigore i termini tecnici e ideologici di una professione, e quindi in certo qual modo i dati obiettivi dalla loro pratica, e perciò soggettiva, attuazione; fasi che tipicamente per Zanuso, costituiscono un tutt'uno organico e in sé coerente."]
serene, of the explorer who knows the jungle palm by palm, its animals and its hidden dangers."\textsuperscript{574} The idea that the architect-industrial designer was a naturalist implicitly likens modern life in the industrial realm to life in a world of flora and fauna. By extension, it portrays industrial products as natural, and so it is compatible with the conception of the industrial designer as someone who makes palatable the forms of industrialization and, by extension, of captialist forces. However, beyond the dichotomy of a romanticized "true" nature and a predatory "false" one, Canella's characterization alludes to a social role for the architect-designer to fulfill by making newly-discovered processes and things comprehensible by his personal acquaintance with them. The characterization of the architect's task in terms of the experience and interpretation of technological discoveries was alluded to by Zanuso in his characterization of the "architect of production," in 1962, whose work could "express this world" and command the "material of industrial design" for a society "set before new and no longer reversible \textsuperscript{574} Canella, "Zanuso il più problematico degli architetti italiani," 62.
productive themes.\textsuperscript{575}

"Naturalist" might refer to a specialist in the medicinal uses of wild plants, for instance. By a comparison of Canella's metaphor to the "concrete science" attributed to the tribal herbalist in the anthropological studies of Claude Levi-Strauss, Zanuso's practice as an interpreter of technologies can be understood as a form of knowledge in itself.\textsuperscript{576} The goal of his practice is to assimilate new discoveries to a coherent system. Its focus is on classifying and organizing its objects. The scientist of this type accumulates tools and concepts based on his experience, and brings these to bear on new situations.

A habit of the concrete-scientist is to work within the constraints of the present rather than seeking to apply general

\textsuperscript{575} As noted in Chapter 3, Zanuso wrote of Mies van der Rohe as an architect who "knew how to express this world profoundly" and who, "in the use of the module, in the joint, in the material, succeeded in bringing together for the spatial emotion spatial and volumetric architectonics, that 'material of industrial design'. . ." In the same passage, he referred to Louis Kahn as an architect who "succeeded in expressing the content and the motive of a society set before new and no longer reversible productive themes." In the Italian, Zanuso's words were, "Fra tutti, Mies van der Rohe forse è l'unico architetto della produzione; l'artista che ha saputo esprimere più profondamenre questo mondo; che nella modulazione, nel giunto;" Kahn confronted the themes ". . . di una società posta davanti a tesi produttive nuove e non più rimandabili." Marco Zanuso, Manuscript of letter dated 1 February, 1962. FMZ MZ CON 003 16 FMZAMM. The manuscript text is identical to Zanuso's comments that were printed in \textit{Stile industria} in the same month. Alberto Rosselli, Gillo Dorfles, Silvano Tintori, Marco Zanuso. "La responsabilità degli architetti" \textit{Stile Industria} 36 (1962): 25. FN

\textsuperscript{576} The term is from Claude Levi-Strauss, "The Science of the Concrete" in \textit{The Savage Mind} (Chicago: University of Chicago Press, 1966), 1-33.
abstract principles to the current situation. Such a sensibility—so defined—is reflected in the recurrence of specific physical forms that link many of Zanuso's buildings and objects to each other. As noted in Chapter 4, Zanuso's series of factories for Olivetti were variations on the assembly of the column, beam, and roof section that first appeared in his CEDIT factory in Palermo. (Made of literal "concrete.") Zanuso himself observed the relevance of his studies of the leg joint on the Lambda chair, to the transition from column to roof in the Brionvega factory building. Another example is the stair in the Linoleum Showroom, a spiral in bent metal that resembled the stair in the offices for Persil, a roughly contemporary interior and façade design project, in reinforced concrete.

Thus understood, Zanuso's approach was unlike that of the developer's architect described by Vittorio Gregotti in his remarks on the Second Generation, with his "general inclination towards

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577 Levi-Strauss compares this use of knowledge to the use of tools by the "bricoleur": "His universe of instruments is closed and the rules of his game are always to make do with 'whatever is at hand,' that is to say with a set of tools and materials which is always finite and is also heterogeneous because what it contains bears no relation to the current project, or indeed to any particular project, but is the contingent result of all the occasions there have been to renew or enrich the stock or to maintain it with te remains of previous constructions o destructions." Levi-Strauss, "The Science of the Concrete," 17-18.

578 Zanuso discussed the connection between these projects in a speech to a conference on the importance of industrial design. "Relazione sul tema 'L'importanza dell'industrial design nella fabbricazione di beni di consumo' al Congresso organizzato dalla C.E.C.A" (Lussemburgo 26/29 ottobre 1965), 3-4. FMZ MZ SCR 002 FMZAMM. The Brionvega factory building, not considered in this study, is included in Marco Zanuso Architetto (Milan: Skira, 1999).

579 "Persil Serbelloni." Fondo Marco Zanuso FMZ MZ MIC 004 004 005. FMZAMM.
schematism." Zanuso was also unlike the architect described by Carlo Perogalli in his 1952 comments on working in Milan, who was pressured to define the building before the developer client would hire him.

The prefabricated shelter that Zanuso designed for the exhibition Italy the New Domestic Landscape, at the Museum of Modern Art in New York is a paradigmatic example of a work that has qualities of both a "style" and "method" of industrial design. These dwelling units were meant to be mass-produced and, with their rounded corners and leveller-feet to lift them above the ground, they resembled large industrial-design objects. They were composed of simple geometric shapes, including triangular windows arranged in square patterns; and the circular edge of the kitchen counter, as well as the tendency toward a cube shape in the expansion pieces. The use of wood panels and colored fiberglass served as both the exterior envelope and interior finish. These aspects lent the object a style in the decorative sense.

In addition, the layout of the tiny kitchen as a work area for a single seated person recapitulated Zanuso's diagram of the Frankfurt kitchen of Margarethe Schutte-Lihotsky, whose work he had studied in

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580 Vittorio Gregotti, "Marco Zanuso, un architetto della seconda generazione" Casabella-Continuità 216 (1957): 59. Gregotti added, "[F]or the drama of invention is substituted the ever more proven scheme. Design in its most intimate qualities of penetration is renounced; instead of the image is inserted the 'found,' which becomes the necessary condition of exchange." Ibid.

581 "The architect who designs today's condominiums can't create an individualized work developed via decisions made on site; he has to present a design beforehand, and have it approved, and deliver what he presented." Carlo Perogalli, "Introduzione ad una architettura," A-Z arte d'oggi + estetica industriale 3 (Apr-May 1952): last pg.(unnumbered).
the early 1940s, and whose method he had adopted for his own kitchen designs, especially for ELAM in the 1960s (as discussed in Chapters 1 and 3). The unit was designed to be put in production according to need. The steel shipping-container chassis on which it was based was augmented by a system of fiberglass wall modules that could be packed into the unit for transportation, or clipped to it once at its destination. The container design also meant that the units could be conjoined to each other, or packed up and moved from place to place in logistical networks of trucks, ships, and helicopters, linking the site to other potential sites around the world. These features reflect the methodical, strategic aspect of Zanuso's industrial designs.

A final observation about Zanuso's method is that his focus on production meant that his projects were predicated upon contingent and tangible labor processes, as distinct from the broader category of science from which other contemporary designers took as their cues. For instance, the idea that the architect was responsible for the "physiological" effects of his designs was fundamental to the design philosophy of the architect Richard Neutra. Neutra supported his conception of architecture by reference to psychology, as he explained in his book Survival Through Design (New York: Oxford UP, 1954).582 He regarded the entire built environment as a continuum in which the forms that emerged from commercial production could be beneficial, but tended to be ineffective or even harmful in the absence of vigilance

582 Marco Zanuso owned the book in Italian, in a 1956 translation by Adriano Olivetti's Edizioni di Comunità.[Progettare per sopravvivere (Milan: Edizioni di Comunità, 1956)].
by architects and designers.

Neutra believed that by intervening in the determination of form and function, the architect could minimize irritation and promote comfort and health for the human occupant. He did not think of "good form" in design in the same terms as Max Bill, who emphasized the assimilation of production to geometrical models with inherent harmonizing properties—a position Bill outlined in his essay "Forma, Funzionha, Bellezza," from his 1952 book Form (Basel: Karl Werner, 1952). Neutra shared with Bill the ideals of the smooth surface, solid color, and abundant natural light, but he based his argument on empirical evidence, citing the findings of current research.583

However, in other examples, the embrace of science led designers to a sort of aporia, in which "science" provided inadequate direction to design. The discourse at the Hochschule für Gestaltung at Ulm, the European industrial design school that was founded in 1952 under the direction of Max Bill, was noted for its attempts to embrace the new human sciences that had developed during the Second World War. Summarizing their attitude in the 1967 essay, "Science and Design," instructors Tomàs Maldonado and Gui Bonsiepe would define design methodology as the "ensemble of methods employed in designing

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583 For example, in a passage that appeared in Industrial Design (the American journal that first appeared in the same year as the Italian Stile industria), Neutra wrote, "Acceptance of design must turn from a commercial into a psychological issue. Fitness for assimilation by our organic capacity becomes a guiding principle for judging design because such fitness aids the survival of the individual, the community, the race itself." Richard Neutra, "Design Means for Survival," Industrial Design 1:1 (1954): 47.
products, their systematic arrangement.\textsuperscript{584} They considered design to be amenable to various sciences, from sociology and psychology (whose relevance was "beyond dispute") to topological analyses of design products and ergonomic evaluations of the rapport between man and machine. But they reserved the prerogative to set criteria for such information. For instance, they criticized a mathematical view of problem-solving which, in its attempt to include aesthetic theory along with mathematics, assumed the adequacy of preexisting aesthetic concepts, which in practice were likely to be outmoded.\textsuperscript{585} In another example, they criticized ergonomic theory for accepting the idea that human beings would permit their bodily functions to be taken over by mechanical proxies.\textsuperscript{586} Nevertheless, in the end, the authors' analysis of science did not produce a coherent positive definition, but instead—a trail of discarded possibilities.

In paying attention to production as a foundation for architectural design, Zanuso focused on what could be developed and made by existing means. In his projects and speeches, he made industrialization and mass production intelligible in terms of already-available resources. For instance, in essay for Rivista Pirelli, Zanuso considered the Italian auto-body maker Pinin Farina as a model for industrial design. He wrote, "The Italian 'carrozzeri' are among the best industrial designers because theirs is a continual


\textsuperscript{585} Bonsiepe and Maldonado, "Science and Design," 20.

\textsuperscript{586} Ibid., 25-26.
research of refinement of forms of technical perfection, of extremely elastic productive organization”; he speculated that "[t]he work they do for the automobiles could be an example for the production of many objects that have yet to be taken to an analogous level of perfection." 587

By turning to a form of labor that already existed in Italy—and had long existed, for manufacture of plows and carriages (which, like automobiles, consisted of a chassis and protective covering). Zanuso grasped the problem of humanity and technology (so to speak) at a level of organization in which the new production method was already socialized, or poised to be socialized. His sensibility for organization, in this regard, is reflected in his early interest in Atelier Jean Prouvé, led by the French designer who had been a metal-fabricator. 588 Zanuso’s involvement in the CLNAI and MSA in the earliest years after the war (discussed in Chapter 1), may not have produced a secure position for architects in a democratic political framework—as Zanuso and other Milanese architects had hoped—but the orientation to organization and production in Zanuso’s work can be understood as their afterimage.

Zanuso, like Neutra, was concerned with what production could offer for the benefit of humanity; but although he was widely read in the new sciences of comfort and organization—his interest in systems

587 Marco Zanuso, "In piccola serie si fa la fuori serie," reprint from Rivista Pirelli, [unnumbered pages, date unavailable]. Fondo Marco Zanuso FMZ MZ CON 003, FMZAMM.

588 Marco Zanuso, "Un’officina per la prefabbricazione" Casabella-continuità 199 (1953): 38.
theory is indicated by many titles on that theme in his office library (see Appendix B)—he kept control of the horizons of the problem by focusing on available production routines in which he could intervene.

The preceding discussion of Zanuso's style and method returns us to the issue of the architect's ethos or responsibility. Some held the architect accountable to the standards of science or the lineaments of culture in the context of capitalistic expansion; Zanuso's work exhibits a commitment to the task of making good the promise of available technology. It may seem like a smaller accomplishment, but Reyner Banham, for one, considered this to be a "deep intellectual and moral need." FN Banham wrote that the display of the ventilation system in the Olivetti factory,

[S]eems to satisfy a deep intellectual and moral need: the need to be able to see the difference between the structure, which is supposed to be permanent, and the services, which are hoped to be transient, and to see that difference made expressive. The building is serviced, and manifestly seen to be serviced; the fact of servicing is seen to be within the architect’s control, even if what is seen is not, in detail, entirely of the architect’s design.589

The motivation of this study was to understand the significance of Marco Zanuso's adoption of industrial design, relative to his relationship to modern architecture, and to the implication of critics, that design led architects away from the social aims of the modern movement. With regard to modern architecture, the chapters have shed light on Zanuso's attraction to industrial design as a means to pursue the Italian Rationalists' ideal of an architecture based on

contemporary production methods. Further, by tracing the repercussions of industrial design in Zanuso's architectural style, the chapters have shown that, while mass production techniques came to be integral to his architecture, they did not compromise it. On the contrary, Zanuso's use of the module and the multiple, in architectural form, assisted his articulation of a contemporary architectural style. Through their neat integration of form and mechanism, and through their inbuilt capacity for reconfiguration, his projects met the demands placed on architecture by rapid technological change, and confronted the aesthetic implications of contingent patterns of use, in the arena of light industry and in the domestic realm, during the 1950s and 1960s.

Clearly, Zanuso did not hold the key to overcoming the economic logics that predominated in the commercial arenas of speculative building and consumerism. In this regard, the modern paradigm may have been a hindrance to Zanuso and other architects, due to its assumptions about the industrial production of durable goods and other fixed capital. Like others in Italy, Zanuso continued to think of design in "industrial" terms—hence his repeated appeals to producers, even in the early 1970s, to adopt mass production and support the education of industrial designers.590 By then, the structure of the economy had already changed to an increasingly tertiary economy.

590 "L'importanza dello stile nella produzione industriale" Il Gazzettino 3 Dec. 1970. The article describes a speech by Zanuso to a business association in Vicenza. Fondo Marco Zanuso FMZ MZ ECO. FMZAMM
On the other hand, Zanuso was not as susceptible as some of his contemporaries to confusion about the points of reference of architecture, in the late-20th century. Faced with the competing claims of other professionals to command architecture's traditional tasks, Zanuso remained true to some of architecture's most traditional aesthetic and organizational priorities while some of his contemporaries asked whether architecture must simply adopt the new forms of knowledge, personnel, and materièl, of the postwar industrial era, without interpretation. The architect's skills of planning and scheduling gained him entrée into the arena of production, but the resources he deployed, one there, had been proper to architecture at least since its assimilation to the "polytechnic" educational system (if not since the Renaissance) including a direct encounter and collaboration with the professionals concerned with mass-production, whom Zanuso approached on the same terms as painters, sculptors, and structural engineers. The visual integration of components and machinery, in his projects, was a mirror of these practices in architectural form.
1.2 Contratti store (1903). Luigi Broggi. Meeks, "The Real Liberty of Italy," 125.
1.9 Arengario [unbuilt project], Milan (1936). Marco Zanuso, Giovanni Albricci, Augusto Magnaghi, Mario Terzaghi, Pier Giulio Trolli. **Il Vetro** 14 (Jan-Feb 1937).
1.15 Villa Scotti, Premeno (1946–1947). Marco Zanuso, Gianni Albricci. Kitchen, plan (top) and section (bottom). Detail from project drawing. Fondo Marco Zanuso, FMZ MIC 001 011b. FMZAMM.
2.2 Office Building on Via Senato. Detail of sculpted door handles. [photography by author.]
2.3 Apartment Building on Viale Gorizia, Milan (1951).
2.8 Showroom for Società del Linoleum, Milan (1952). Marco Zanuso with Gianni Dova, Mario Ballocco. Section (top) and Plan (at Mezzanine level) (bottom). Fondo Marco Zanuso, FMZ MIC 008. FMZAMM.
2.10 Showroom for Società del Linoleum, Milan (1952). Marco Zanuso, with Gianni Dova, Mario Ballocco. Section detail with stair and desk. Fondo Marco Zanuso FMZ MIC 008. FMZAMM.
2.15 Cover, Stile industria 1 (1954). (Monochrome reproduction of color original.)
2.18 Albe Steiner’s advertisements and window displays for Società del Linoleum. Stile industria 1 (1954): 43.
2.19 Showroom for Società del Linoleum (1952).
Marco Zanuso, Gianni Dova, Mario Ballocco.
Detail of section drawing showing sketch of vitrine display. Fondo Marco Zanuso, FMZ MZ MIC 008. FMZAMM.
2.20 Cover design of Edilizia Moderna 48 (1952). Colored wedges and arcs are red and yellow in the original.
2.21 Cover, *Campo Grafico*, October 1937.
2.22 Exhibition catalog for *Selected Examples of Italian Industrial Design* (1955), curated by Marco Zanuso. Cover design by Germano Facetti.
2.23 Catalog pages from Selected Examples of Italian Industrial Design (1955). From top to bottom, an Olivetti recording machine designed by Marcello Nizzoli; Marco Zanuso's "Martingala"; FIAT V8 sports car and FIAT 600 dashboard (not credited to a single designer).
La 1ª mostra delle arti e dell'estetica industriale

L'organizzazione della mostra è stata affidata alla direzione dell'Arflex, società conosciuta per il lavoro di ricerca esvastersi in campo industriale. La mostra è composta da esemplari di mobili, da tavole di legno, da pannelli di alluminio, da lastre di vetro e da altri materiali. La mostra è stata realizzata con l'aiuto di diversi artisti, come A. I. e G. V., che hanno lavorato su un tema comune: l'estetica industriale. La mostra è stata aperta al pubblico il 1° dicembre e ha ricevuto un grande successo. I visitatori hanno apprezzato la qualità dei materiali utilizzati e la suggestione dell'estetica industriale. La mostra è stata un'occasione per riflettere su come l'arte e l'industria possano collaborare per creare un ambiente di vita piacevole e funzionale.

3.2 Cover and pages from Milano Oggi (Milan: Edizioni Milano Moderna, 1958).
3.3 Apartment Complex on Via Laveno (1963). Marco Zanuso with FEAL. Street view (photograph by author); detail-[Marmo tecnica architettura 7:5/6 (1966)], and elevation drawing by Zanuso' office. Fondo Marco Zanuso FMZ M2 MIC 074 010. FMZAMM.
3.4 Apartment Complex on Via Laveno (1963). Marco Zanuso, with FEAL. Plan. Fondo Marco Zanuso FMZ MZ MIC 074 002. FMZAMM.
3.5 Apartment Complex on Via Solaroli (1965). Marco Zanuso, with FEAL. Street View (bottom) [Google Maps, Google Street View of Via Solaroli, Milan] and drawings [Fondo Marco Zanuso FMZ A DIS T90 (top), T159 (middle), FMZAMM].
3.7 Paper stub with advertisement on magazine clipping. Eco della Stampa file, Fondo Marco Zanuso. FMZ MZ ECO 1970. FMZAMM.
3.8 Examples of an article in syndication, collected in Marco Zanuso's "Eco della stampa" file. Fondo Marco Zanuso. FMZ MZ ECO 1964. FMZAMM.
3.9 "Signature" designers. Zanuso is in third row from bottom, head on hand. "Eco della stampa" file, Fondo Marco Zanuso, FMZ MZ ECO 1972. FMZAMM.
3.10 "Tree of ideas." Clipping from Novella, December 10, 1964. Fondo Marco Zanuso. FMZ MZ ECO 1964. FMZAMM.
3.12 White chairs. Clipping in "Eco della stampa" file, Fondo Marco Zanuso, FMZ MZ ECO. FMZAMM.
La signora bilancia amica delle diete

Cosa può essere determinante nella tenuta di una dieta? Certamente l'aspetto fisico e la pazienza, ma non dimentichiamo la dieta. La dieta, infatti, è un elemento fondamentale nella gestione del peso e della salute. Ma affrontando le diete e la bilancia, capita di sottolineare le ernie di coloro che hanno scelto di adottare il metodo di perdita di peso più naturale, meno costoso e più sano. Infatti, il complesso del concetto di dieta è un aspetto fondamentale per chi vuole perseguire obiettivi di salute e benessere. E se la bilancia è un elemento fondamentale nel monitoraggio del peso, ecco un articolo che ne parla in dettaglio.

La bilancia può essere un amico delle diete, ma è importante saperla utilizzare correttamente. In questo articolo, vedremo come la bilancia può diventare un albero del benessere.

1. **La signora bilancia amica delle diete**

La bilancia può essere un amico delle diete, ma è importante saperla utilizzare correttamente. In questo articolo, vedremo come la bilancia può diventare un albero del benessere.

2. **La bilancia come socio della dieta**

La bilancia può essere un amico delle diete, ma è importante saperla utilizzare correttamente. In questo articolo, vedremo come la bilancia può diventare un albero del benessere.

3. **La bilancia come socio della dieta**

La bilancia può essere un amico delle diete, ma è importante saperla utilizzare correttamente. In questo articolo, vedremo come la bilancia può diventare un albero del benessere.

4. **La bilancia come socio della dieta**

La bilancia può essere un amico delle diete, ma è importante saperla utilizzare correttamente. In questo articolo, vedremo come la bilancia può diventare un albero del benessere.
3.15 Design for men. Television and cable radio designs by Marco Zanuso and Richard Sapper. Clipping in "Eco della stampa" file. Fondo Marco Zanuso, FMZ MZ ECO, FMZAMM.
3.16 The divan is "reborn every day." Clipping from Gioia (Mar 1972): 40-41. "Eco della stampa" file, Fondo Marco Zanuso. FMZ MZ ECO 1972. FMZAMM.
FMZ MZ ECO 1964. FMZAMM.
3.23 E5 kitchen (1965-1972), and tile. The headline reads, "But is it really a service?" Marco Zanuso for Ilam. Interni (Oct 1972). "Eco della stampa" file Fondo Marco Zanuso, FMZ MZ ECO 1972. FMZAMM.
del tavoli) già costruiti solo per la zona giorno, lasciando l’albergo (solvendone i problemi) e la zona in zona a dedicare la decorazione alla funzione dell’abitazione.

Alla base di questo impegno, la necessità di maggiore, percentuale molto esattamente del progetto, è stata quella — come si è già detto più sopra — di ampliare ed adeguare la superficie, sia visivamente (ricorrendo una comprensione degli ambienti) ad adattarli a tal fine, riguardo tutti gli accorgimenti possibili, degli ambienti e dell’illuminazione, distribuendoli (rendendo una diversificazione a una circostanza del periodo) ampliata si è detto, ma naturalmente con il vincolo di una conformazione sistemativa neutra per tutte le persone della famiglia e con la necessità intempestica di mantenere una superficie di soggiorno sufficientemente ampia, in tenuta, di cui uno, ovvero ve ne fosse stato bisogno — una buona permanenza nel corso della giornata.

Per quanto riguarda i mobili e gli elementi d’arredo, impieghi, acquisirono ad alcuni il tavolo da pranzo

Ecco dell’Amedeo.

4.1 With page rotated: detail of Factory for Olivetti at Buenos Aires (F.O.A.) (bottom) [Fondo Marco Zanuso FMZ MIC 026a 301 FMZAMM]; drawing of factory at São Paulo (F.O.B.) (top right) [Fondo Marco Zanuso FMZ MIC 038a 045 FMZAMM]; and detail of factory at Scarmagno (top left) [Marco Zanuso Architetto (Milan: Skira, 1999)].
4.7 "Not touching at all." Detail of early F.O.A. drawing (1955). Fondo Marco Zanuso FMZ MIC 026a. FMZAMM.
Columns have "++" footprint characteristic of final scheme.

Dotted lines indicate extension of canopy past wall perimeter.

4.11 F.O.A. (1959). Marco Zanuso. Detail of plan drawing with late column/roof configuration. (Dotted circle added.) Fondo Marco Zanuso FMZ MIC 026a 096. FMZAMM.
Fondo Marco Zanuso FMZ MIC 038a 061. FMZAHM.
4.17 Newspaper advertisements by Erberto Carboni (top) and Leonardo Sinisgalli (bottom).
La grande area su cui sorge lo stabilimento Olivetti, nel Parco San Paolo.

Egitto:

MOVIMENTO A OPERA ITALIANE CARSUTI

Un monumento, alla memoria di circa 5000 operai italiani caduti sul lavoro in Egitto negli ultimi 60 anni, durante la costruzione delle dighe sul Nilo (Assuan, Isna ed Asbu) è stato asportato recentemente sotto la sorveglianza del ministero marittimo di Egitto.

Una legge con decreto legislativo italiano ed araba concesso del cimitero di affermazione di questi caduti e se invia le specifiche giovani ai posti sani.

Etiopia:

Grande stabilimento italiano
PER LA LAVORAZIONE DEL LEGNO

Nelle vicinanze della capitale capitali è stato inaugurato, a cura di imprenditori italiani, un nuovo grande stabilimento per la lavorazione del legno che contribuirà a dare un impulso alla lavorazione del legno, i materiali per la lavorazione del legno, e i legname a fornire che formano dell'odierna. Il stabilimento, per quanto è stato lavorato, circa 8000 metri quadrati, è diviso all'ufficio di legname, che oggi si occupa di lavorare, ed il settore di lavorazione del legno.

Il Commissariato Generale del Turismo e alcune organizzazioni affini hanno deciso di mettere a disposizione di stampi francos e stranieri una camera di lavoro per facilitare il soggiorno in Etiopia. Questa camera, che viene chiamata chambre de France, consisterà prevalentemente in una
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