

Typology of Welcoming Space. An Analysis of Doors in Domestic Space by Luigi Caccia Dominioni*

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Abstract. This paper focuses on Luigi Caccia Dominioni (1913-2016), a Milan-based architect during the post-war period. The study explores Dominioni's methodology and unique characteristics of space segmentation using doors, windows, and other fixtures in his architectural designs, hypothesizing that these elements create a typology of welcoming space. Through an analysis of the Housing on Via Vigoni, four distinct techniques were identified: (1) Transition of Thresholds in Adjacent Spaces, (2) Visually Connected Spaces, (3) Intersection of Theatrical Perspectives, and (4) Exploring Imaginary Space. A comparative analysis of four residential projects revealed Dominioni's consistent approach to creating an alternative to the modern corridor-based floor plan by incorporating traditional Italian palazzo compositions and unique spatial segmentation methods. Dominioni's design techniques reflect his intention to form welcoming spaces within domestic environments, considering the characteristics of Milanese houses as places for social gatherings. His approach demonstrates the development of a consistent and distinctive style in post-war Milan, presenting a model that should be revisited in contemporary domestic space.

Key Words: Luigi Caccia Dominioni, domestic space, architectural design, room, door, housing on Via Vigoni, design theory, typology

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1 Introduction

1.1 A Forgotten Architect: Luigi Caccia Dominioni

This study focuses on the residential architectures designed by Luigi Caccia Dominioni (1913–2016, hereafter Dominioni), who worked based in Milan during the Post-World War II period.

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The aim is to explore the characteristics and methodology of the spatial segmentation, especially focusing on doors and windows in his residential architecture.

Dominioni was born in 1913 into a lawyer's family in Sant'Ambrogio, Milan. After studying architecture primarily under Piero Portaluppi (1888–1967) at Politecnico di Milano, he established his first design studio in 1937 with the Castiglioni brothers (Livio Castiglioni: 1911–1979 and Pier Giacomo Castiglioni: 1913–1968). After collaborating with the Castiglioni brothers in various design competitions, furniture and product design, as well as exhibition compositions for the Milan Triennale, Dominioni founded his own studio shortly after the Second World War in 1946. He was involved in approximately 60 projects until the late 1960s, with about 90% of these projects encompassing programs like residential complexes and housing. His articles were published in influential architectural magazines in Milan, such as “Casabella Continuità” and “Domus”, receiving critiques from figures like Ernesto Nathan Rogers (1909–1969) [11], Gio Ponti (1891–1979) [10], and Giancarlo De Carlo (1919–2005) [1].

In the 1970s, Dominioni's works gradually faded from public attention, including magazines, and were almost forgotten until a rediscovery by Giacomo Polin, who published an overview of Dominioni's history and major works [9]. Three years later, the journal “Ottagono” published an article about Dominioni, in which mainly residential projects and design methods were evaluated by Fulvio Irace (1988) [7]. Subsequently, in 2002, a retrospective exhibition organized by Irace and others took place at Castelvechio in Verona, leading to his acknowledgment as “one of the most significant Italian architects of the modern era.”

1.2 Former Studies

Overall, a few studies and publications have been done on the works of Dominioni. Alberto Gavazzi and Marco Ghilotti published their research on Dominioni in several books, mainly introducing Dominioni's church works [6] and projects outside Milan [5]. However, a systematic investigation of Dominioni's residential work is not included in their research.

In this context, the dissertation by Elli Mosayebi represents the first detailed and scholarly examination of domestic space in Milan by Dominioni [8]. Mosayebi's research aims to comprehensively understand Dominioni's residential architecture within the sociocultural context of post-war Milan, using the Italian concept of “ambiente” (historical and spatial environment) as a central theme.

In contrast, this study aims to provide a more in-depth understanding of Dominioni's design methods by focusing on various types of fixtures, particularly doors and windows, and examining how they are used to create unique spatial compositions. By investigating the relationship between these fixtures, room compositions, and interior finishes, this research seeks to extract the key techniques that characterize Dominioni's architectural language.

Furthermore, this study places a strong emphasis on the detailed analysis of specific works, particularly the Housing on Via Vigoni, to reveal how Dominioni's design intent is embodied in the actual spaces. Through this approach, we aim to clarify the unique characteristics of Dominioni's spatial composition methods and their contemporary significance.

As mentioned above, in Italy Dominioni is known as one of the most important architects of urban housing in post-war Milan. However, there are almost no systematic investigations in English or Japanese, partly due to the scarcity of his own writings and his distance from academic community. This study attempts to fill this gap by providing an analysis of four selected residential works by Dominioni, focusing on the role of architectural fixtures in creating unique spatial experiences.



Figure 1: Dominioni, Exterior of Housing on Via Vigoni, cited from [2].

2 Analysis of Interior Space in Housing on Via Vigoni

2.1 Overview

This chapter examines the Housing on Via Vigoni (Figure 1), one of Dominioni's representative works, in light of his design intent. A 1994 interview with Dominioni in "Abitare" magazine revealed three key aspects of his approach: the importance of the entrance, the sequence of gradually welcoming people, and forms associated with people's natural behavior. This chapter hypothesizes that these characteristics are embodied in the Housing on Via Vigoni, thus creating a typology of welcoming space.

The Housing on Via Vigoni, a seven-story streetside residential complex was designed in 1955 and completed in 1959. While usually not open to public visits as it is private housing, Dominioni exhibited it as "Study of the distribution of the compartments of a medium-luxury accommodation" on the 12th Milan Triennale, where he worked as a curator. Additionally, detailed internal photographs and drawings were featured in "Domus" magazine in 1961 [2]. For these reasons, the Housing on Via Vigoni can be considered a residential work that reflects his thinking.

Photographs and drawing materials are collected as much as possible from the previous studies, architectural magazines such as "Domus", and "IUAV Archive". The target is the area that can be determined from the photographs and plans. By examining the Housing on Via Vigoni, this chapter aims to reveal the compositional techniques that constitute Dominioni's typology of welcoming space.

2.2 Transition of Thresholds in Adjacent Spaces

Generally speaking, the door is an element that both connects and divides two areas. Considering that the architect's thoughts on movement within spaces are reflected in the placement and design of the door, the change in the nature of areas when the door is closed and open is examined.

The most distinctive findings were on the fifth floor (Figure 2), where upon entering the entrance from the stairwell, there is a space surrounded by nine doors, including six leading to separate rooms, along with the entrance and closet doors. Furthermore, the surface of

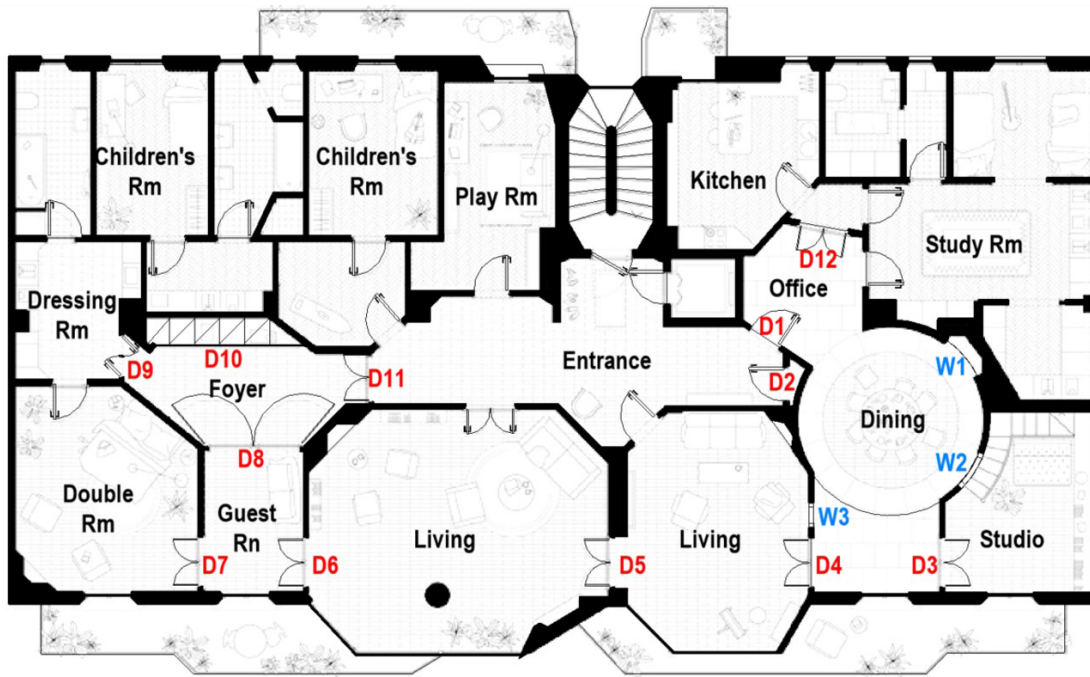


Figure 2: Dominioni, 5FL Plan of Housing on Via Vigoni.



Figure 3: Looking from the foyer to the entrance. The guest room is visible on the right.



Figure 4: Looking from the entrance towards the foyer.

closet door D2 is finished similar to the wall and door D1 (Figure 3), featuring only a circular brass handle. As there are no windows at this entrance, it remains entirely isolated from both outside and inside, allowing guests to recognize only the presence of multiple rooms without fully grasping the overall layout. Upon opening door D11, there is a front room before the guest room, which includes three doors: a closet-like D10 integrated with the wall, the massive door D8 leading to the guest room, and door D9 leading to the dressing room (Figure 4).

The door D8 extends to the ceiling with a brown “C”-shaped line on a white-painted surface, forming a single rectangle when the door is closed. When completely opened, door D8 transforms the foyer and the guest room into a connected space. This door nearly aligns with the front wall, and the wall beside the closet also exhibits a similar “C”-shaped design, suggesting Dominioni intended for door D8 to appear as part of the wall when open. The flooring of the guest room is finished with the same wooden flooring as the entrance, creating a seamless, continuous surface without any breaks. Based on these features, when door D8 and

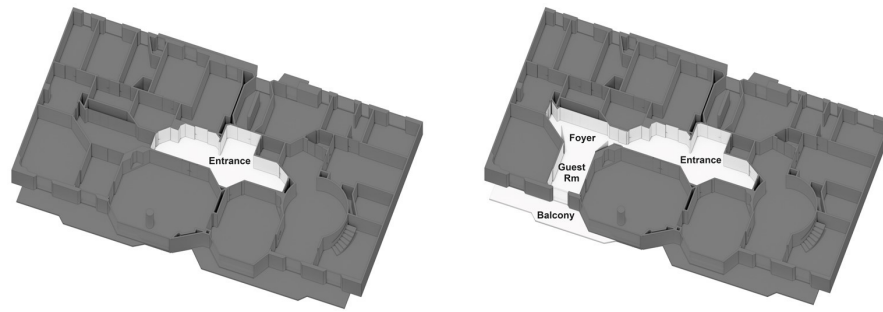


Figure 5: The left shows the space that can be recognized when the door is closed, and the right shows the space that can be recognized when the door is opened to welcome visitors.

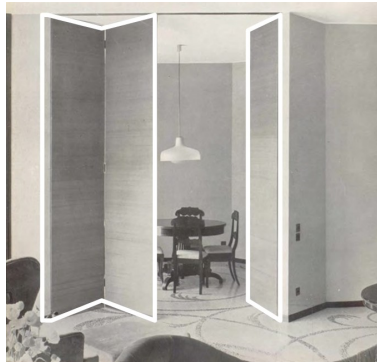


Figure 6: Folding doors extending to the ceiling

D11 are opened, the guest room and the foyer can be considered as an expanded welcoming space. Visualizing the transition of the entrance space by opening and closing the door results in the following diagram (Figure 5).

Moreover, similar manipulations altering spatial boundaries through door opening and closing are observed between the living and dining areas on the second floor. Here, the full-height folding door is without handrails or other details. When the folding door is closed, it looks like a wall. However, when the folding door is opened, the mosaic tile pattern on the floor, which has a bird motif, is continuous. It is clear that Dominioni intends to create a different spatial environment when the doors are opened and closed (Figure 6).

Dominioni utilizes various types of doors to adjust the threshold space through door opening and closing. This enables residents to tailor environments for both welcoming and everyday living needs. Furthermore, by combining the manipulation of doors with the continuity of flooring materials between different areas, Dominioni introduces further variations in the relationship with adjacent spaces.

2.3 Visually Connected Spaces

On the fifth-floor plan, the rooms along the balcony side consist of more private spaces like bedrooms and living rooms. Doors in these rooms are horizontally arranged along the balcony. Consequently, from the main bedroom at the end to the studio, there is a linearly connected space, creating a viewpoint where one can overlook all rooms at once (Figure 7). This method of arranging doors on an axis to create a penetrating line of sight is similar to the *enfilade* used in palaces of Baroque architecture, etc., and is a reference to Dominioni's



Figure 7: Looking from the dining area towards the living room.

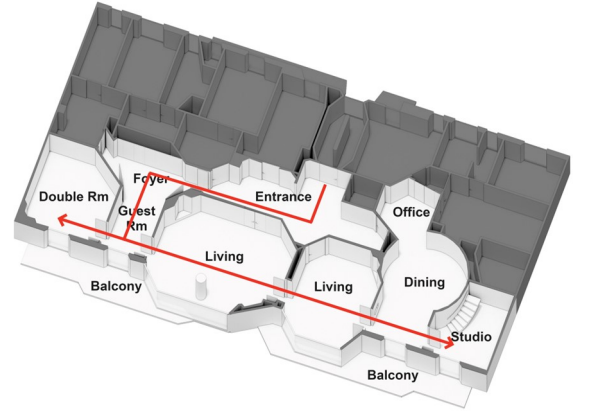


Figure 8: Experiential sequence created by the opening of the doors.



Figure 9: Visual continuity through windows above the door.

attitude of respect for tradition and history. What is important here is that the enfilade is adopted as a method to realize the design intention, rather than simply imitating past styles. This creates a continuous sequence leading from the guest room to the studio. This is an expression of the quality of welcome and an indication of Dominioni's intent to create a long sequence. (Figure 8) As for the door on the second floor, it is a general height door that is not full height and has a door frame (Figure 9). However, a fixed round window above each door, aligned across the corridor, establishes visual continuity between the spaces. This can be understood as an expression of Dominioni's will to achieve his design intent despite the various constraints.

2.4 Intersection of Theatrical Perspectives

The studio, situated at the end, features a three-story high void space and an intricate pathway formed along the outer side of the dining room's cylindrical wall (Figure 10). Along this pathway, there is a mezzanine, leading to a loft space equipped with a bed. These elements embody the intention identified in the previous section's interview to maximize the pathway as much as possible. They achieve this by occasionally transforming existing rooms into part of the circulation path. Moreover, this triple-tiered space reminiscent of Adolf Loos' Raumplan generates an intersection of theatrical perspectives. Theatrical perspectives



Figure 10: Studio designed with a skip floor spanning three levels.

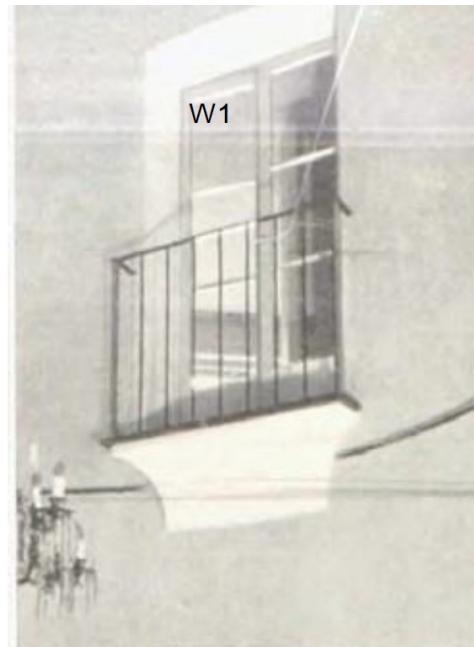


Figure 11: Balcony-style windows installed at the top of the dining.

involve viewpoints in adjacent spaces that are physically divided but visually interconnected. This theatrical viewpoint is observed in the dining area's void space above and the window installed on the wall between the mezzanine accessed by the stairs from the studio (Figure 11). Designed similar to balcony windows, these windows create a relationship where only visual perspectives intersect between those in the dining area and those on the mezzanine.

2.5 Exploring Imaginary Space

On the second floor, several areas where imaginary spaces are created through the use of mirrors and windows can be seen. When viewing from the second-floor entrance to the living room, a mirror with a fireplace is placed at the focal point (Figure 12). This mirror creates an effect of imaginary space. Through the reflection in the mirror, it allows the observer to perceive the presence of another person who is not actually visible. Additionally, in the example shown in Figure 13, the left door leads to the office and the right one to the entrance. A glass window is used above the left door, illuminating the passage with light from the office. On the other hand, a mirror is used above the right door. The mirror reflects the other window, creating the effect of an imaginary space that does not actually exist on the other side. The arrangement of these mirrors creates a simultaneous sense of reality and fiction for the observer, akin to the effect of a Velázquez painting, suspending perception.

Furthermore, the small office facing the dining room on the fifth floor has its walls, ceiling, and hidden door completely covered with frescoes (Figure 14). This can also be understood as a trick to give the visitor the impression that there is a utopian space behind the dining room. From this, it is clear that Dominioni intentionally designed the room to give the impression of an imaginary space.



Figure 12: The imaginary space created by the mirror

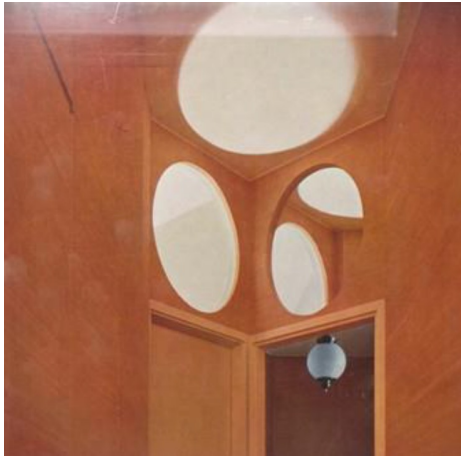


Figure 13: Two symmetrical doors, one with a glass window, the other with an mirror.



Figure 14: Walls, ceiling, and hidden door covered with frescoes.

3 Comparative Analysis of 4 Selected Projects

3.1 Extraction of Fixture Types

This chapter provides a comparative analysis of four residential projects by Dominioni, using the techniques found in the Housing on Via Vigoni discussed in the previous chapter as a reference. In particular, we focus on the relationship between Dominioni's methods and the composition of fixtures such as doors and windows. The projects for analysis were selected from a list of about 60 projects undertaken by Dominioni around Milan until around 1968, and four projects were chosen for which floor plans and photographs of the interior of the housing could be confirmed from magazine articles and archives of the time. (Figure 15)

For the analysis, doors, windows, mirrors, etc. that could be identified from the drawings, photographs, and sketches of each project were extracted and listed by type. From these, elements that seem to be related to the four design techniques found in the Housing on Via Vigoni, "Transition of Thresholds in Adjacent Spaces," "Visually Connected Spaces," "Intersection of Theatrical Perspectives," and "Exploring Imaginary Space," were extracted and summarized in the diagram below (Figure 16).

A is the Housing on Via Vigoni analyzed in the previous chapter. B is an apartment with a pentagonal floor plan on Corso Italia, designed in 1957, with offices and commercial facilities on the lower floors. C is the Villa San Valerio, also designed in 1957, which is a renovation project of an 18th-century villa in Albiate near Milan. D, Casa Pirelli is a four-story urban

No.	Project	Year	Use					
			Res.	Off.	Rel.	Exh.	Com.	Pub.
13	Housing on Via Vigoni	1955	○					
14	Office on Corso Milano	1957		○				
15	Housing on Corso Italia	1957	○	○			○	
16	Villa San Valerio	1957	○					
17	Housing Complex on Via Santa Maria alla Porta	1958	○				○	
18	Housing Complex on Via Massena	1958	○					
19	Casa Geronazzo	1958	○					
20	House on Via Tamburini	1958	○					
21	Housing Complex on Via Santa Croce	1959	○					
22	Sant'Antonio Convent	1959			○			
23	Legnano Tower	1959	○	○			○	
24	Renovation of the Ambrosiana Library	1959						○
25	Housing Complex on Piazza Carbonari	1960	○					
26	Renovation of a House on Via Gesù	1960	○					
27	Casa Zucchi (Housing Complex on Via Tiziano)	1962	○					
28	Casa Pirelli	1962	○					

Figure 15: List of projects designed by Caccia Dominioni around Milan (excerpts).

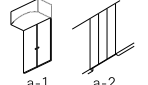

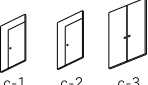



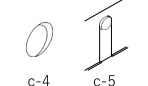
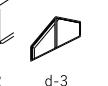



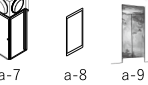

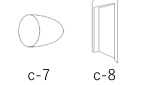

Projects Technique	A	B	C	D
	Housing on Via Vigoni	Housing on Corso Italia	Villa San Valerio	Casa Pirelli
Transition of Thresholds in Adjacent Spaces	 a-1 a-2	 b-1	 c-1 c-2 c-3	 d-1
Visually Connected Spaces	 a-3 a-4 a-5	 b-2	 c-4 c-5	 d-2 d-3
Intersection of Theatrical Perspectives	 a-6	N/A	 c-6	 d-4
Exploring Imaginary Space	 a-7 a-8 a-9	 b-3	 c-7 c-8	 d-5

Figure 16: Comparison of fixture type.

residence, where Pirelli's family lived on the top two floors.

The results from Figure 16 revealed the following. First, it was confirmed that Dominioni consistently used the technique of changing the relationship between adjacent spaces through the manipulation of doors and windows in these works. For example, in Casa Pirelli, the plan (Figure 17) shows that the entrance and living room are partitioned by a door (d-1). However, the photo reveals that when the double doors are opened, they fit closely against the walls on both sides, creating a detail that minimizes the presence of the doors. Furthermore, the ceiling of the living room is in the shape of a cross vault, giving design continuity to the arch of the door, creating the effect that the two rooms feel like a single space originally.

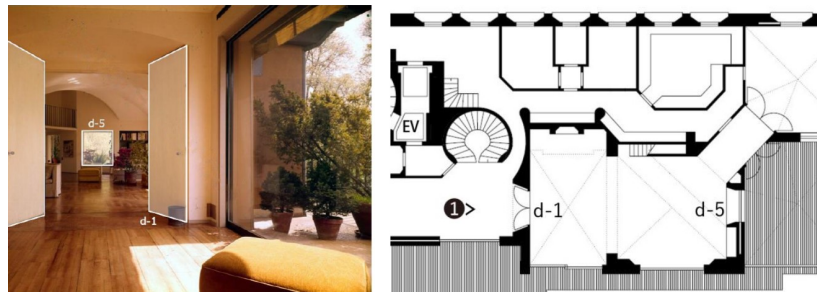


Figure 17: Interior view and enlarged 4FL plan of Casa Pirelli.

On the other hand, in the Villa San Valerio and the Housing on Corso Italia, there were unique door types that had not been seen before. This is thought to be due to the different preconditions of the project, such as the shape and size of the building, and whether it was a new construction or renovation, which differ from the two residences previously mentioned, and there are differences in the method of floor plan composition itself compared to the Housing on Via Vigoni and Casa Pirelli. However, even under such limitations, it is clear that Dominioni is trying to incorporate elements related to the four techniques as much as possible, with a focus on “Transition of Thresholds in Adjacent Spaces.” For example, the three doors (a-3) like the revolving door in Corso Italia can change the relationship between adjacent spaces in many ways through variations in how they are folded (Figure 18). This door has a glossy, highly reflective finish, integrating the external landscape with the mirror by the window ahead, creating visual continuity. The mirror is installed on both side walls, exploring the space of illusion with the effect of a pair of mirrors. Also, in Villa San Valerio, a triangular niche is created at the connection of the rooms, creating an unusual space by combining three doors (a-4,5,6) (Figure 19). Furthermore, there is a balcony-like place above this door, creating a theatrical perspective. In this way, although there were no instances of “Intersection of Theatrical Perspectives” in the Housing on Corso Italia, which does not have a mezzanine, the upper balcony was consistently used in the other three cases (c-1, c-2, c-3). Regarding “Exploring Imaginary Space,” there is a pattern using a pair of mirrors (d-4) in the Housing on Corso Italia, a wall disguised as a door (d-6) in Villa San Valerio, and in Casa Pirelli, a framed window (d-7) is placed at the eye-stop, cutting out the sunroom beyond like a painting.

As discussed above, it was found that while Dominioni repeatedly used special door types in each project, he also explored unique door types specific to the project. Furthermore, the use of these fixtures is considered to have been an important means of realizing his design philosophy. In the next section, based on these findings, we would like to conduct a more in-depth consideration of the significance of Dominioni’s methods.

3.2 Discussion on Door and Corridor

In this section, we consider the significance of Dominioni’s unique design methods, focusing particularly on doors and corridors. To begin with the conclusion, Dominioni’s uniqueness lies in his recognition of the problems with the corridor-type floor plan composition, which has become established since the modern era, where each room is connected to the corridor through doors, and his attempt to create a new typology of space for welcoming guests by combining historical examples and his own spatial articulation methods. According to architectural historian Robin Evans, among Italian architectural theorists of the 16th century,

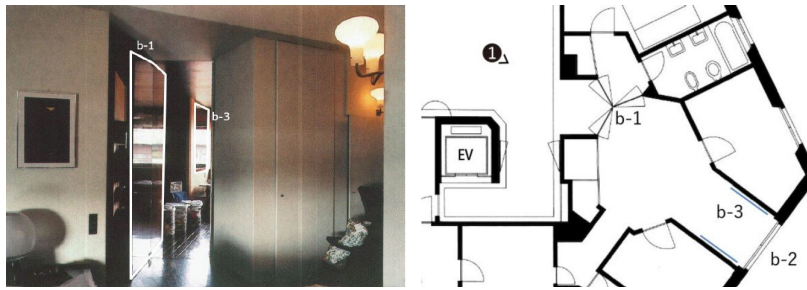


Figure 18: Interior view and enlarged floor plan of Housing on Corso Italia.

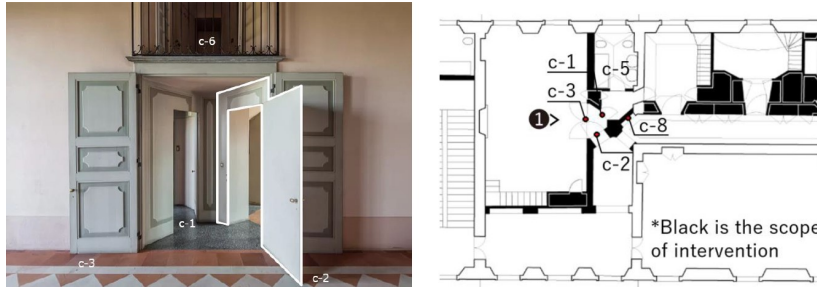


Figure 19: Interior view and enlarged 2FL plan of Villa San Valerio.

it was considered good for a room to be connected to as many parts of the building as possible, and there was a belief that a convenient room had many doors [3]. As shown by Raphael's Villa Madama (1519) and Palladio's Palazzo Antonini (1556) (Figure 20), residences of this era did not have corridors connecting the rooms. It was unavoidable that routes would intersect during the day, and all activities were likely to be interrupted. However, this was common in this era.

On the other hand, corridors first appeared in the historical record around 1597 in Beaufort House in Chelsea, designed by John Thorpe, and later in the 18th century, the theory of separating corridors and rooms (Figure 21) spread by Robert Kerr. Since then, the corridor-type floor plan has become mainstream, but this partitioning and separation were primarily for convenience. Here, convenience meant promoting functional and purposeful communication and ensuring privacy. However, this may also subconsciously lead people to believe that incidental encounters are unnecessary, and that contact should be avoided as it disrupts the smooth functioning of daily life. This is the problem with the corridor-type floor plan composition as Evans pointed out. As this layout becomes increasingly common in society, it consequently hides its impact on life even more.

Dominioni probably understood this based on his intuition and experience. Looking at the floor plan of the Housing on Via Vigoni, it can be inferred that while retaining the functional parts of the corridor-type composition, he incorporated the composition of traditional Italian palazzos and created his unique spatial expression by combining various door techniques.

In Milan, where socializing is customary, what was needed in the space for welcoming guests was not functionality or privacy, but incidental encounters, physical interaction, and sociability. Therefore, Dominioni selected from historical examples a composition in which rooms are interconnected without corridors (as Evans points out, this composition is suitable for a society where socializing is usual), and freely transformed it to adapt it to modern life.

Evans noted that a modern layout to replace the corridor-style floor plan had not been

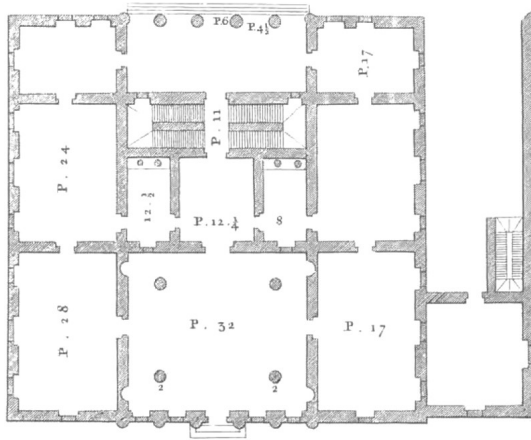


Figure 20: Palazzo Antonini, Udine, by Andrea Palladio, 1556, cited from [3].

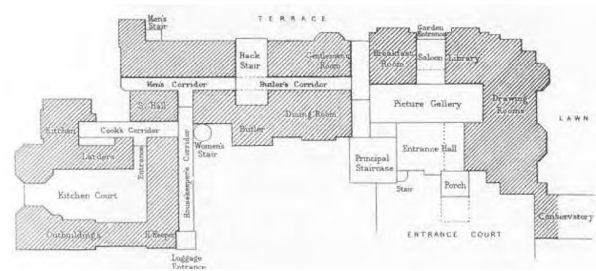


Figure 21: Bearwood, by Robert Kerr, 1864. Thoroughfare plan, cited from [3].

discovered even long after Dominioni's work, but Dominioni had already shown his own modest answer to this problem. Furthermore, Evans's introductory statement, "The most profound mysteries are concealed in the most ordinary things" [3], provides valuable insight into understanding Dominioni's interior designs. Seemingly ordinary architectural elements such as doors and windows were actually used as important means to influence people's lives and concepts of convenience, creating a new dwelling space.

4 Conclusion

This study examined Luigi Caccia Dominioni's design intent and methods, focusing on the fixtures in his residential works, which were mainly developed in Milan. In Chapter 2, based on Dominioni's design intent extracted from interviews, the Housing on Via Vigoni was analyzed in detail, revealing his four specific design techniques.

1. Transition of Thresholds in Adjacent Spaces: manipulating the relationship between adjacent spaces through the opening and closing of doors.
2. Visually Connected Spaces: creating a linear sequence of visually connected spaces by using doors and windows.
3. Intersection of Theatrical Perspectives: generating intersecting viewpoints between physically divided but visually interconnected spaces.
4. Exploring Imaginary Space: using mirrors, windows, and wall finishes to create the illusion of additional spaces.

These techniques aimed to give various levels and changes to the relationship between adjacent spaces through the design of the elements that compose the space. In particular, doors and windows were not merely functional openings, but important devices equipped with various "tricks" to realize Dominioni's distinctive style.

Chapter 3 further confirmed that the techniques found in the Housing on Via Vigoni were also commonly seen in other residential works. These techniques were used in similar ways in Dominioni's other residential projects, revealing that they had become a consistent part of his design language. At the same time, each project showcased unique creativity in the design of the fixtures, demonstrating the wide range of Dominioni's design vocabulary and showing an alternative to the corridor-type floor plan composition that has become established in modern

times, where each room is connected to the corridor through doors.

In conclusion, Dominioni's design methods are regarded as based on the characteristics of Milanese houses as places for socializing, transforming the quality of space between the private realm of daily life and the public moment of welcoming guests. This reflected his intention to create a welcoming space for guests within a limited area.

“Being welcomed, crossing the threshold, needs a definite place with its own emotional ambience. So I think of corridors almost automatically as sequences of welcoming places, and I even try to change them into galleries whenever I can.” [4]

As described above, Dominioni's welcoming space can be said to present a typology that should be revisited in today's domestic space.

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