

***New Ways of Living the Domestic Environment:
An Analysis of Flexible Design With the Proposal of an Experimental Case Study***

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Abstract

The 1972 exhibition *Italy: The New Domestic Landscape*, which explored constructed and domestic environments, marked a pivotal shift in the design vision, influenced by political, and cultural debates, and evolving social living of the time. This reflection focused on the relationship between humans and objects, a milestone of Italian design masters’ philosophy. Following this heritage, contemporary designers address modern living needs through flexible, multifunctional spaces equipped with modular and adaptable furniture. The paper examines Joe Colombo's design scenarios, viewing living spaces as “habitats” reflecting “social, political, technological evolution” (Vitta, 2011). Fluid living spaces have transformed home functions, attributing them new roles linked to different lifestyles. Today's design culture refers to the observation of behaviors within domestic spaces and the coexistence of activities in the same environment, which shape the appearance of homes (Molinari, 2020). Lauda (2012) reimagines living spaces as flexible, where the actions taking place affect the morphology of the environment with concealed objects that make the home not just a container of monofunctional areas, but empty spaces to be set up and adapted according to needs. Homes transform into multifunctional spaces for private life, work and socializing. The rise of smart-working, especially post-COVID-19, has blurred domestic and work space boundaries, emphasizing indoor quality (ventilation, lighting, soundproofing) and emotional well-being (psychophysical comfort). The paper describes the experimental case study *Metaforma*, a modular system of polyurethane foam elements that can be assembled in different configurations to suit the body, addressing adaptability for work and rest, enhancing customization, comfort and daily activity efficiency.

Keywords: Flexibility, Adaptability, Modularity, Space Optimization, Domestic Environment

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Introduction

In the last decades, the way people live and inhabit domestic spaces has undergone a radical transformation. The concept of the home has evolved from a static location to a dynamic space, adaptable to the ever-changing demands of contemporary life. This transformation has been influenced by economic, technological, and cultural factors, leading to emerging trends such as increasing flexibility in housing solutions.

These shifts in the concept of living are not confined to recent years; they have deeper roots. Since the 1970s, design has increasingly played a pivotal role in the evolution of living spaces. Italian design history reveals that it has not only responded to contemporary needs but also anticipated and shaped people's habits, influencing the spaces they inhabit. Reflections on living have benefited from various contributions, often ahead of their time, which have however anticipated current trends by addressing needs that have emerged in recent years.

Today, the boundary between private and public life is increasingly blurred, with work and recreational activities entering the domestic space. This context creates a need for contemporary design to develop solutions that allow domestic spaces to be flexible and reconfigurable, meeting the demands of increasingly mobile and interconnected lifestyles.

The Evolution of Living Spaces

Since the 1970s, design has assumed an increasingly central role in the evolution of living spaces, addressing the continuously changing needs of society. This period marks a crucial transition, as design moved beyond merely reflecting social changes to actively influencing them, transforming how people interact with domestic environments. This transformation impacted not only the aesthetic aspects of interiors but also how users perceive and use their homes.

A significant contribution to the evolution of living space design is represented by the exhibition *Italy: The New Domestic Landscape*, held in 1972 at MoMA in New York. This event presented alternative visions of domestic space, showcasing design as a political tool capable of influencing daily habits and behaviours, transcending mere decoration. Emilio Ambasz, the exhibition's curator, encouraged designers to create environments and furnishings that could stimulate new rituals and behaviours for every moment of the day. These spaces were intended to be flexible, incorporating objects that transformed in both form and function to symbolically represent the identity of a constantly evolving society (Gallanti, 2009). The installations featured at the exhibition envisioned a future where objects were no longer static and isolated but part of interactive and dynamic configurations, enabling new domestic rituals. To highlight the transformability of spaces, designers were invited to produce accompanying videos that emphasised the interactivity of their works (*Environments and Counter Environments*, n.d.; Museum of Modern Art, 1972). An emblematic example of this approach is represented by the work of Joe Colombo, who presented both objects, such as the *Tube Chair*, the *Multichair*, and the *Minikitchen*, and environments, such as the *Total Furnishing Unit*, reimagining the domestic space and its activities in unprecedented and revolutionary ways.

The exhibition installations challenged the inadequacy of traditional spaces while criticising the uniformity of industrial production and the false progress of consumer society. The exhibition marked the consolidation of radical design, with projects reflecting changes in

customs and living habits, often in a polemical stance against consumer society and middle-class culture (Colonetti et al., 2010, p. 28). Radical design groups such as Archizoom and Superstudio explored the potential of domestic spaces as sites for social interaction. In their utopian visions, space was no longer static but fluid and continuously evolving, allowing inhabitants to redefine their living experience.

A notable transformation in living spaces during this period was the increased flexibility of environments. Before the 1970s, homes were divided into rooms dedicated to specific functions: kitchens for cooking, living rooms for socialising, bedrooms for resting, and so on. With the evolution of design, these boundaries became less rigid, paving the way for multifunctional spaces that adapted to various needs. This change fostered new habits, enabling a more dynamic and flexible lifestyle.

By the late 1970s, criticism of rationalist design gained prominence in Italy. The message of the radical avant-garde was revived by design groups such as Studio Alchymia and Memphis, whose international composition underscored the necessity of extending design practice geographically (Vercelloni, 2014, p. 154). “In opposition to the values of sobriety and strict functionality celebrated by modern tradition, [the radical experiments developed by Alchymia and Memphis] aimed to shift design logic towards a different relationship with objects, based on affectivity, communication, and a sensory relationship with things” (Vitta, 2011). During this period, designers created environments that promoted greater personal expression, influencing lifestyles and living habits. The home was no longer merely functional but became a reflection of the inhabitants' personalities and lifestyles.

In the 1980s and 1990s, the emergence of working from home led to the creation of the home office and hybrid furniture that blurred the lines between office and home furnishings. The boundaries between home and work became increasingly indistinct, creating new domestic spaces for interaction while making offices more homely. This transformation redefined intimacy, as public spheres traditionally separate from private life began to expand within domestic walls (Vercelloni, 2014, p. 179). The globalisation of Italian design during the 1980s and its orientation towards international markets in the following decade faced the challenges of globalisation. During this period, design increasingly aligned with marketing and global trends, partly abandoning the ideological motivations of Italy's industrial boom and the utopian principles of 1970s avant-garde movements.

In the 1990s production sought new market opportunities, particularly in the furniture sector. Products became symbols of not only social status but also lifestyle choices, transforming consumer goods into emblems of individual preferences, much like fashion (Colonetti et al., 2010, p. 40). Globalisation and the orientation towards marketing have fostered the co-existence of eclectic styles, reflecting the personal inclinations of designers. Global complexity has given rise to different trends coexisting without obvious conflicts, and the designer has emerged as a reference point, with a design poetics that becomes the message itself (Branzi, 1999, p. 164). Despite the innovations in industrial techniques in the 1990s, the culture of living did not experience an equivalent transformation. Many so-called innovations, such as multifunctional or transformable furniture and deconstructed seatings, had already been introduced by the avant-garde of the 1970s. Similarly, the design of this period did not experience the same cultural revolution that had brought the introduction of plastics and the spread of household appliances in the 1960s. As there was no substantial transformation of everyday objects, the value of objects in this period often derived from their beauty, rarity, or eccentricity (Colonetti et al., 2010, pp. 40–41).

Designing for Flexibility

In recent decades, social, economic, and technological changes have further transformed lifestyles and living habits. Urbanisation and migration towards cities, driven by work opportunities and services, have increased the demand for urban housing, raising housing costs (European Commission, 2023; Eurostat, 2024c; Goujon et al., 2021). Concurrently, the average household size in Europe has decreased, with a significant rise in single-person households (Eurostat, 2024d). The COVID-19 pandemic accelerated trends such as remote working, transforming homes into multifunctional spaces that combine work, social life, and rest (Eurostat, 2024b; 2024a). These developments have led to a general reduction in living space sizes, fostering solutions that optimise space in densely populated urban contexts. This reduction, combined with the need to accommodate new domestic functions, has redefined the home as a flexible and adaptable space.

Flexibility and adaptability are not merely practical responses but reflect a deeper shift in behaviour and expectations regarding living spaces. As Lauda (2012) highlights, “Living spaces must be conceived not only as containers of single-use areas but as empty spaces to be furnished and adapted according to needs,” emphasising that space should be seen as a dynamic entity capable of evolving with inhabitants' changing behaviours. This approach aligns with a spatial economy that creates a potential void, always free and not pre-designed, open to transformation. The void is thus not an absence but an image of readiness for change and a new economy of form and language (Lauda, n.d.; TEDx Talks, 2013). Flexible design addresses multiple needs: the contemporary home is no longer solely a space for rest or conviviality but also a workplace and a site of socialisation. This transformation necessitates spaces that can quickly change configuration without losing functionality. Modular furniture and reconfigurable environments are essential elements in meeting these new demands.

Today's design culture observes domestic behaviours and the coexistence of activities within the same space, shaping homes accordingly (Molinari, 2020). This trend relates to a broader concept of continuous adaptation, where the home is viewed as a system responding actively to external stimuli and inhabitants' needs. Modular furniture allows for environments that evolve alongside users' behaviours, turning space into an extension of human activity rather than a mere backdrop. This approach necessitates a design mindset that goes beyond the traditional conception of space as rigid and predefined. Contemporary designers are required to think in terms of use scenarios, anticipating changes and creating solutions that allow users to shape space according to their needs. In this context, flexibility extends beyond furniture to include the capacity of spaces to evolve and respond to new behaviours and habits emerging over time.

An application of this approach can be seen in contemporary design projects. Such as *Urban Nomad* by Hannabi, a modular, non-traditional sofa composed of two long rectangular cushions forming the base and a pair of triangular supports that can function as backrests. The absence of fasteners or legs allows the system to be easily arranged into two separate seating areas or stacked into a single unit with double the height, granting users the freedom to reconfigure the space.

In a different way, Geoffrey Pascal's *Grafeophobia* explores an innovative approach to furniture design. Designed for individuals who work or study in unconventional contexts, such as the bed, this collection addresses the challenges posed by limited spaces, promoting ergonomic and multifunctional solutions that enhance comfort and productivity. It consists of

three different types of seating with a wooden base and foam coverings of varying densities, enabling users to work in positions that mimic lying in bed while also supporting the body.

Moreover, an intriguing example is *Tou* by Sakura Adachi, a multifunctional, portable beanbag. It doubles as an informal pouf that unfolds into a futon mat complete with a pillow and blanket. When folded, it functions as a compact, lightweight beanbag chair that is easy to transport. The project embodies the concept of an object that adapts to different needs with simplicity and immediacy.

A similar concept of space optimisation is evident in the *Tiny Home Bed* by Yesul Jang, a bed with integrated storage space beneath the mattress, concealed by a fabric curtain. Designed for young people living in compact urban spaces, the bed features a lightweight wooden and fabric structure that is easy to assemble and transport.

Another example of innovation in furniture for small spaces is Seray Ozdemir's *Corridor Society* collection, which transforms apartment corridors into functional social spaces. The collection includes four pieces: a corner seat, a combined seat and coat rack, a stackable shelving unit, and wall-mounted cushions. Its objective is to create new spaces for social interaction, turning corridors into areas of connection in apartments lacking communal spaces.

This theoretical and project overview provides the conceptual foundation for exploring innovative solutions, highlighting how the combination of flexibility and multifunctionality can effectively address contemporary housing challenges.

Experimental Case Study: Metaforma

In this context, from the critical analysis of the examples given above, the experimental case study *Metaforma* emerges as an innovative response to the challenges of modern life, where the boundaries between domestic and workspaces are increasingly blurred. It is a modular system (Fig. 1) designed to adapt seamlessly to different daily needs, combining comfort, functionality, and a high degree of customisation. Whether used in a home office or a coworking environment, *Metaforma* envisions spaces as dynamic and transformable, evolving according to the activities and preferences of their occupants.



Figure 1: The Modular System *Metaforma*

The system consists of five polyurethane foam cushions, each with different dimensions, shapes, and densities, designed to provide ergonomic support and address emerging needs. This modularity enables users to combine the cushions as they prefer, accommodating their physical requirements or varying activities throughout the day. The three primary configurations, sitting, reclining, or lying down (Fig. 2 and 3), are designed to ensure maximum comfort and facilitate a smooth transition between work, relax, and rest. The true strength of the system, however, lies in its versatility: users can create new configurations, adapting the elements to their lifestyle and needs.



Figure 2: The Different Configuration of the System

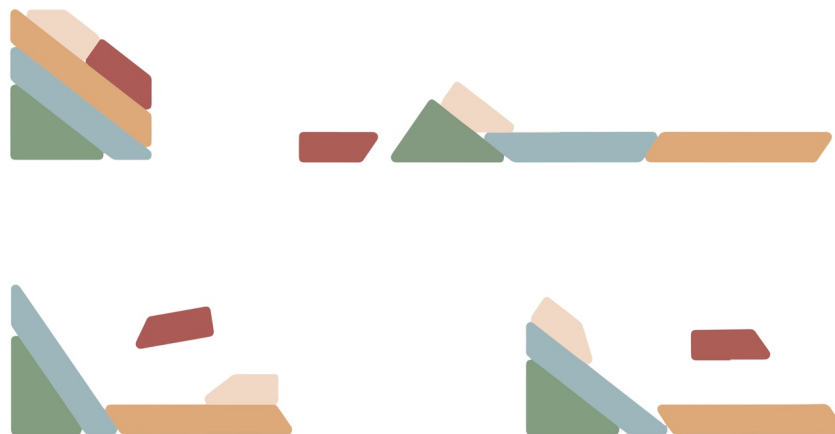


Figure 3: Functional Scheme of the System

Another innovative feature of *Metaforma* is its ability to transform into a compact sixty-centimetre cube when not in use, secured by two leather straps (Fig. 4), a solution ideal for small spaces and for those who seek to maintain a tidy, functional environment in an era where optimising space is essential.



Figure 4: The System in Its Closed Configuration

The project stems from an in-depth reflection on the relationship between the body and space, aiming to create an object that places flexibility at the core of the user experience. The choice of polyurethane foam is deliberate, ensuring comfort, lightness, and ease of transport. The project is not merely a piece of furniture but a design solution addressing the need for change in how we inhabit spaces. Its flexibility and adaptability make it a product that meets the diverse demands of contemporary life while looking to the future, contributing to a redefinition of our conception of space and living environments.

Conclusion

The increasing complexity of contemporary lifestyles, along with the integration of work and social activities into domestic spaces, have redefined how homes are conceived and designed. As discussed in this paper, flexibility and adaptability have become fundamental principles of home design, transforming domestic spaces into multifunctional environments capable of addressing a variety of changing needs. This transformation, although rooted in the experimentations of the past, reflects the urgencies and aspirations of contemporary society, highlighting a progressive break from the rigidity of traditional spaces.

It is evident that modularity, reconfigurability, and the observation of human behaviour are central elements for present and future home design. These approaches not only respond to practical needs for space optimisation but also promote psychological and physical well-being, efficiency, and personalisation. The concept of emptiness as potential for change emphasises the importance of spaces that do not merely contain but offer continuous opportunities for transformation. The *Metaforma* case study exemplifies how research can contribute to developing solutions that address contemporary needs, highlighting the potential of design as a catalyst for positive changes in everyday life.

Looking ahead, home design must continue to evolve in response to societal challenges and changes, without losing sight of its primary goal: to create spaces and furnishings that are functional, emotionally engaging, and capable of adapting to individual and collective needs. Ultimately, the home of the future will not be defined solely by its physical boundaries but by its ability to serve as a dynamic reflection of the life it hosts.

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