Post-Pandemic Hybridism: Rethinking Residential Architecture in the Age of Digital Life

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Abstract: The digital revolution and COVID-19 pandemic have catalyzed fundamental changes in how residential spaces are conceived, designed, and utilized. This paper examines the emergence of hybrid living spaces through the lens of three interconnected phenomena: the rise of remote work, the evolution of shared living arrangements, and the increasing digitalization of domestic life. Existing architectural frameworks, anchored in clear divisions between work, home, and public space, struggle to accommodate the fluid, asynchronous, and technology-driven demands of contemporary life. Through illustrative case studies including co-living facilities (e.g., The Collective in London), long-term hostels (e.g., Moda Drei in Istanbul), and hybridized corporate workplaces (e.g., Spotify and Google offices), this research identifies key patterns in the transformation of residential design. Our findings indicate that traditional distinctions between working and living spaces are dissolving, giving rise to what we term post-pandemic hybridism: an architectural paradigm characterized by digital connectivity, spatial flexibility, and communal interaction. Successful contemporary residential design must now accommodate acoustic privacy, digital accessibility, and opportunities for both social interaction and focused work. These findings suggest a shift away from fixed urban density models toward distributed, technology-enabled living. The paper concludes with a proposed framework for interpreting these emerging spatial typologies and their implications for architecture, urban planning, and social organization.

Keywords: Shared living, Remote work, Digital nomads, Hybrid spaces, Residential design, Co-living.

1. Introduction

The built environment, from homes to commercial skyscrapers, is traditionally viewed as a collection of permanent structures in an ever-changing world. However, rapid advances in technology, climate change, and population growth are intensifying pressures on these structures. In this dynamic context, design practices can struggle to keep pace, particularly in traditional fields like architecture, where work with tangible materials and irreversible processes renders errors especially costly compared to product, game, or even interior design. As a consequence, outdated architectural approaches can adversely affect the very users they are intended to serve. This article seeks to answer the following question: What are the primary effects of ubiquitous internet access and interconnected devices on the formation of spaces, specifically residential environments? In other words, how is digitalization—especially the rise of remote work and mobile connectivity—reshaping the design and function of contemporary residential spaces?

In recent decades, the notion of sharing has evolved dramatically. The proliferation of shared digital content is reshaping politics, lifestyles, and economies alike. Influencers have emerged as a new form of leadership, leveraging global connectivity to reach audiences from virtually any location. Many of these content creators are not anchored to a fixed geographical location; instead, they travel and produce work from diverse contexts—a phenomenon that can be characterized as "placelessness". According to the 'Oxford Dictionary of Human Geography', placelessness is defined as "the condition of an environment lacking significant places and the associated attitude of a lack of attachment to place caused by the homogenizing effects of modernity, such as commercialism, mass consumption, standardized planning regulations, alienation, and an obsession with speed and movement" [1]. This condition of placelessness influences residential architecture by shifting emphasis from permanence and local rootedness toward adaptability, modularity, and digital integration.

Housing design must now accommodate transient lifestyles, offering flexible spatial configurations, plug-and-play infrastructures, and personalization mechanisms that respond to a globally mobile population. Digital content creators exemplify this trend by relying more on mobile devices and internet connectivity than on traditional, fixed workspaces. As a result, many frequently relocate, dynamically adapting their living environments in response to shifting economic and social conditions. Moreover, professions ranging from accounting and teaching to programming are increasingly conducted in virtual workspaces rather than in conventional offices. This mobility has spurred the development of short-term living arrangements that are more affordable and better suited to monthly stays compared to hotels or traditional long-term rentals [2]. These digitally enabled lifestyles reduce reliance on fixed, individualized workspaces and increase demand for housing types that are flexible, technology-integrated, and often shared. As digital workers navigate across regions and time zones, residential spaces must be reimagined not just as private sanctuaries but as dynamic nodes in a global network, blurring lines between domestic, professional, and communal zones.

Before getting into the specifics of shared spaces, it is important to clarify that the term 'shared spaces' in this paper does not refer to public areas such as streets, squares, or parks, which are freely accessible and typically managed by municipal or governmental authorities, but rather to privately managed spaces. For the purposes of this study, shared spaces are defined as areas with a clearly delineated entrance, operated by an organization or individual, and available for temporary or permanent use by registered users in exchange for a fee. Additionally, this article lays the groundwork for further discussion on sharing in virtual environments and examines the interplay between digital and physical sharing practices.

These evolving forms of shared space and collaborative urbanism suggest a shift in architectural thinking, from designing for fixed, private ownership to enabling spatial fluidity, modularity, and co-use. For architects, this translates into design strategies that emphasize spatial overlap, flexible thresholds between private and communal zones, and support for asynchronous use through lighting, acoustic control, and digital infrastructure.

2. Theoretical Background

2.1 The Rise of the Sharing Economy

The term 'sharing economy' or 'collaborative economy' is used to describe a new form of sharing developing in societies today; the sharing of anything from a saxophone or a lawnmower to a car. The share economy is in the literature described in many different ways by many different authors, among which are "a trend that is reshaping our service-

based society" by Voight (2013) and as "access rather than owner-ship" and a mentality of live light, waste less, to protect the environment by Rosenberg (2013) [3, 4]. Silver (2013) defines the sharing economy as "a way of sweating underutilized assets, by building communities around them and turning consumers into providers", and Owyang et al. (2013) defines it as "...an economic model where ownership and access are shared between corporations, start-ups, and people..." [5, 6].

Websites facilitating diverse forms of sharing are numerous (thesharehood.org n.d.; collaborativeconsumption.com n.d.; nesta.org.uk n.d.; greenvillages.com.au n.d.; shareable.net n.d.), and several books have been published on the subject, where Botsman & Rogers (2010) publication "What's mine is yours – the rise of collaborative consumption" are among the more well-known [7]. But the new ways of sharing have not stopped with the sharing of smaller items or possessions, and are now starting to move from stuff to space by the progression of the Collaborative Economy to Collaborative Urbanism.

2.2 Post-Pandemic Hybridism

The worldwide shock of the COVID-19 pandemic affected how we treat semi-open, semi-private spaces and rethink the essence of inside and outside spaces. People all around the world more or less witnessed multiple waves of quarantines and felt their effects on social life and their daily routines in their bones. While some domains like internet-based services, health care services, transportation industries, goods deliveries, and international trading got affected immediately and mostly adopted and reacted to new circumstances, their effect on architectural design and especially residential spaces can now be seen. users of residential spaces, which results in new demands and expectations from a living space. These demands bring up new priorities, and ignoring them would cost a lot for those involved in building industries. For instance, those who had the horrible experience of being entrapped alone in their tiny apartments may look for residential projects that give them more communal opportunities, better semi-private outdoor spaces and bigger living spaces for their future settlements.

Meanwhile, some trends such as e-commerce and online shopping that were started before Corona got to a new level. The force for online shopping left many shopping malls closed for more than a year, and some organizations and research centers started to predict possible further scenarios [8]. has discussed the possible transformation of shopping malls to residential buildings, providing a successful example of Arcade Providence in Rhode Island, which partially transformed into 48 micro-loft apartments (Figure 1). The Covid-19 effect may or may not have a permanent effect on shopping malls, but online shopping seems to becoming more and more popular, leading to less popularity of physical shopping malls. Converting vacant real estate, including empty lots or shopping malls, to host new functions might be one of the few proper solutions to reduce urban footprint, reuse existing materials and structures, and contribute to slowing down global warming effects.

This study draws on a combination of secondary sources (published case studies, design literature, and architectural media) and direct observation to illustrate theoretical patterns. While not intended as a formal empirical analysis, the examples serve to highlight the spatial consequences of digitalization and hybridization in residential architecture. The examples presented throughout this article, such as co-living facilities, adapted hostels, and hybrid corporate spaces, are not part of a systematic case study methodology. Rather, they have been selected as illustrative cases that exemplify emerging spatial patterns aligned with the theoretical concerns of the study. These cases were chosen for their relevance,

diversity, and capacity to highlight recurring architectural responses to digitalization and hybrid living.

Figure 1. The top two floors of the Arcade Providence shopping mall are transformed into residential space, which is creating an enclosed neighborhood [9]

The current study attempts to shed light on unrecognized activities and spaces that future residents will demand and take a step toward providing solutions to fulfill them. Some of these demands are caused by COVID-19, some have been felt before, and the coronavirus issue accelerated them, and some have nothing to do with COVID-19, but are more related to changes in lifestyles caused by digitalization and internet accessibility. While COVID-19 might have boosted the process, it is undeniable that the world we live in now is highly dependent on the internet, and hybrid spaces have become an indispensable part of life. This effect is mostly visible in residential spaces by constant connection to job-related topics, and specifically, remote working.

3. Shared Living Experience

Talking about shared living experience can be seen from two points of view: first, how we physically share residential spaces, and second, how we share a portion of our living environment through digital equipment and platforms with others. While the focus of this section is new ways of sharing physical spaces, the effect of sharing documents, contents, and other digital assets through digital devices is also reviewed between the lines.

3.1 Physically Shared Living Spaces

The digitalization of modern life has transformed our relationship with physical spaces, extending from communications and workspaces to transportation systems. The sharing economy has revolutionized how we utilize personal spaces, exemplified by the rise of vehicular sharing platforms [10]. This evolution raises a crucial question: Should we reconceptualize our approach to shared living spaces beyond traditional care facilities for the elderly? The transformation is already underway, as evidenced by platforms like Airbnb and Couchsurfing, which facilitate the sharing of temporary spaces [11]. A new demographic has emerged: long-term hostelers who migrate between temporary accommodations globally, driven primarily by remote work opportunities. However, current architectural paradigms haven't adequately adapted to accommodate these emerging residential patterns [12].

The trend toward shared living spaces can be attributed to several societal shifts. Demographic changes, particularly the declining fertility rates in developed nations [13], have resulted in underutilized residential spaces. The average household size has decreased

significantly, leading to reduced social interactions within traditional living units [14]. This transformation has sparked concerns about social isolation among younger generations and immigrants who have disconnected from traditional support networks [15].

Technological advancement has been a key catalyst in this transformation. The proliferation of remote work opportunities, enabled by digital connectivity, has fundamentally altered the relationship between employment and geographic location [16]. This shift has given rise to 'digital nomads', location-independent professionals who leverage technology to work remotely while residing in shared spaces [17]. Their emergence represents a significant departure from traditional residential patterns, challenging conventional architectural and urban planning paradigms.

3.2 The Hybrid Living Space

The concept of hybrid living-working spaces, although often perceived as contemporary, has deep historical roots that predate industrialization. Historically, commercial establishments were typically extensions of residential spaces, with craftsmen's workshops and merchants' shops integrated into their dwellings [18]. The Industrial Revolution marked a significant shift, introducing strict delineation between residential and commercial spaces, manifested in the proliferation of dedicated office buildings and manufacturing facilities [19].

Paradoxically, contemporary workplace design has begun reintegrating residential elements, marking a return to historical patterns. The adaptive reuse of industrial spaces into lofts during the 1980s and 1990s represents a pivotal moment in this evolution. Cities like New York, Paris, and London witnessed the transformation of industrial architecture into modular living spaces, characterized by high ceilings and flexible floor plans that particularly appealed to the artistic community. Today's digitally augmented living typologies resemble earlier "loft living" experiments in their blend of flexibility and status [20]. This transformation catalyzed the development of cultural ecosystems, with auxiliary businesses such as cafes, galleries, and entertainment venues emerging around these converted spaces. Notable districts like SoHo in New York exemplify this urban transformation phenomenon, recalling how new forms of housing may displace existing communities and contribute to gentrification [21].

The contemporary resurgence of hybrid spaces differs from its historical precedents, primarily due to technological advancement. While the loft movement preceded the internet era, modern hybrid spaces are shaped by cloud computing and digital collaboration tools that have revolutionized industries from product development to finance [22]. This technological infrastructure has facilitated new forms of work-life integration, particularly among knowledge workers.

The retail sector's transformation, accelerated by e-commerce platforms like Amazon and Shopify, has created new opportunities for spatial repurposing. American shopping malls, facing declining foot traffic due to changing consumer behaviors and exacerbated by the COVID-19 pandemic, are being reimagined as mixed-use developments [23]. These "legacy structures" are undergoing adaptive reuse similar to the industrial-to-residential conversions of previous decades, responding to the persistent demand for housing while acknowledging the diminishing relevance of traditional retail spaces.

The evolution of workplace design has witnessed two parallel trends: the rise of remote work ("working from home") and the domestication of office spaces ("homing from work"). Major technology companies like Google and Spotify have pioneered this latter approach, fundamentally reimagining corporate environments (Figures 2 and 3) [24]. This transformation represents a significant departure from conventional office design paradigms, which typically featured cellular offices or open-plan layouts with cubicle partitions [25].

The "homing from work" phenomenon has introduced residential and recreational elements into corporate environments, creating what Grech and Walters (2016) term "domesticated workplaces" [26]. These spaces often incorporate living room-like settings, kitchen areas, and recreational zones that more closely resemble domestic or entertainment spaces than traditional offices. Companies are increasingly adopting what Ross (2019) describes as "playful design elements", transforming corporate headquarters into hybrid environments that blur the boundaries between work, home, and leisure spaces [27].

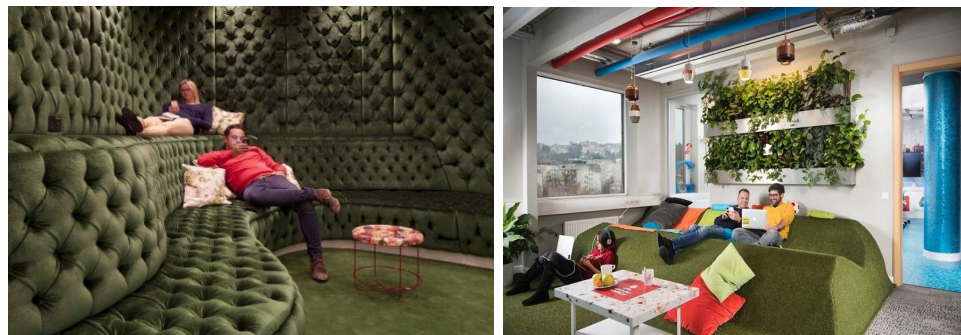Figure 2. Reflection of Spotify's "work from anywhere" policy to make its offices feel more like home [28]

Figure 3. Google Offices in Budapest and London. An effort toward bringing back the co-existence of work and living spaces [29, 30]

3.3 Typology of shared spaces

Brinkø, Nielsen and van Meel's (2015) framework for classifying shared spaces through the fundamental questions of "when", "why", "who", and "how" provides a valuable analytical structure that can be extended beyond physical spaces. Their typology, which scales from shared desks to entire buildings, mirrors similar hierarchical patterns found in digital sharing ecosystems [7, 31].

Just as physical spaces can be shared at various scales and intensities, digital sharing platforms operate across multiple levels of access and engagement. For instance, cloud storage services like Dropbox and Google Drive implement sharing paradigms that range from individual file sharing to complete folder access, analogous to how physical spaces can be shared from a single desk to an entire building [32]. The temporal aspects of sharing ("when") in physical spaces - from occasional to permanent use - find their digital counterparts in temporary file access versus permanent collaborative workspaces.

The motivations ("why") for sharing in both physical and digital realms often align: resource optimization, cost reduction, and community building. However, while Lee et al.

(2010) focus on shared interior spaces in apartment buildings [33], and Rafferty (2012) examines physical shared spaces more broadly, digital sharing platforms have evolved to create virtual analogues of these physical sharing arrangements [34]. For example, virtual meeting rooms and digital collaboration spaces mirror the functionality of physical shared facilities, but with the added dimension of geographical independence [16].

The "who" aspect of sharing has become increasingly complex in the digital age. While physical space sharing often involves known participants within geographical boundaries, digital sharing can facilitate collaboration among globally distributed users who may never meet in person. This transformation has led to new taxonomies of sharing that encompass both physical and virtual dimensions [35].

The "how" of sharing has perhaps seen the most dramatic evolution. Physical space sharing requires careful coordination of access, scheduling, and maintenance, as documented in traditional sharing frameworks. Digital sharing platforms have automated many of these processes, introducing new mechanisms for access control, resource allocation, and usage tracking that would be difficult or impossible to implement in physical spaces (Figure 4) [36].

TYPOLOGY OF SHARED USE OF FACILITIES

Type	Sharing a specific facility – a desk or a workspace in a semi- closed community	Sharing several facilities in an open or semi-closed community	Sharing physical space in a building or a building in itself in a closed community	Sharing facilities between users in a network of buildings/organizations in an open, semi-closed or closed community
General attributes	Sharing is facilitated by an owner and directed towards private individuals	Sharing in the form of a building owner making specific facilities available to the general public	Sharing of space inside a building between different groups or organizations	Sharing of facilities between users of different buildings with different owners
When	Simultaneous use	Simultaneous and serial use	Simultaneous and serial use	Simultaneous and serial use
Why	Keep costs down Synergy	Keep costs down Optimized use CSR activity	Keep costs down Optimized use Surplus space	Keep costs down Optimized use Synergy
Who	Access is restricted to individuals approved by the owner	Access is available to a large group of people in addition to own employees	Access is restricted to pre-agreed groups or individuals decided by the owner	Access is available for employees/residents from the buildings involved
How	One party has ownership of the space, and individuals can gain access either free or for a fee	The organization with ownership opens up specific parts of their property for use for the greater public	One party has ownership of the space and makes it available for specific groups or individuals for a fee	Different building owners come together and agree on sharing specific facilities or buildings instead of each having one
Examples	1) Republikken, DK 2) Plywood sheds, USA 3) School sharing, NED 4) The HUB, DK	5) Lyngby Idraetsby, DK 6) Rambøll, DK 7) Frivilligcenter Hillerød, DK 8) Risskov Library, DK	9) FOF Lyngby, DK 10) Fjaltring-Trans, DK 11) Churches, UK 12) Shared use hubs, AUS 13) Space for entrepren., USA 14) Airport passenger buildings 15) Use of school premises, UK 16) Centre for A & E, LTK, DK 17) Denver Shared Spaces, USA	18) Musicon, DK 19) Manchester Media City, UK 20) Shared school campus, NIR

Figure 4. Typology of shared spaces [31]

3.4 Co-Living and Short-Term Housing Industry

Co-living represents a contemporary reimagining of traditional communal living arrangements, designed to foster social interaction and collaborative living in urban environments. Recent research indicates that this housing model has gained significant

traction as a response to urban isolation and changing work patterns [37]. The Collective in London exemplifies this trend, offering micro-apartments alongside extensive communal amenities, demonstrating what Tummers (2016) describes as the "new collaborative housing paradigm" [38].

The spatial organization of co-living facilities typically consists of private living quarters integrated with shared social and work spaces. This hybrid model responds to what Musterd and van Gent (2016) identify as evolving urban lifestyle needs, particularly among young professionals seeking both community connection and workspace flexibility [39]. Emerging platforms like Anyplace and Draper have further developed this concept by explicitly integrating workspace considerations into their co-living models. While co-living offers flexibility and amenities, it often comes at a high premium, potentially excluding lower-income residents [40].

3.5 Hostel Life

Observations on hostel life reveal the multifaceted nature of these shared accommodations. Hostels offer a microcosm of global diversity, bringing together travelers from various continents and walks of life. The stereotype of hostels as solely for young backpackers is challenged by the presence of diverse age groups, from students to retirees, coexisting harmoniously. This environment fosters a social dynamic where individuals are primarily judged on their behavior and interactions rather than superficial factors [41]. An emerging trend in hostel design is the integration of workspaces to cater to the rising population of digital nomads, reflecting the evolving needs of modern travelers who blend work and leisure. These insights paint a picture of hostels as dynamic spaces that not only facilitate travel but also serve as hubs for intercultural connection and remote work in an increasingly globalized world (Figure 5).

Figure 5. Shared spaces in Cheers Hostel in Istanbul

The case of Moda Drei in Istanbul's residential district illustrates what Hampton (2016) terms "lifestyle mobility" - a phenomenon where individuals choose long-term hostel living as an alternative to permanent residence [42]. This represents a significant departure from traditional housing patterns and reflects broader societal shifts in how people

conceptualize 'home' and 'permanence'. The presence of long-term residents, such as the American woman with nine years of hostel living experience or the former Kazakh accountant who embraced this lifestyle, exemplifies what Cohen (2011) describes as "lifestyle travelers" - individuals who adopt mobility as a way of life rather than a temporary state [43].

The integration of communal kitchens and living spaces in hostels like Moda Drei demonstrates what Griffiths and Gately (2015) identify as "social architecture" - design elements that facilitate both practical needs and community building [44]. These spaces serve multiple functions:

1. Professional environments for remote work

2. Social hubs for cultural exchange

3. Domestic spaces for daily living

4. Networking platforms for global citizens

The diversity of residents observed, spanning different age groups, nationalities, and professional backgrounds, aligns with Morrison's (2015) findings on the democratization of shared living spaces [41]. This heterogeneity contributes to what Hannam and Butler (2019) term "cosmopolitan sociality" - environments where cultural exchange and social learning occur organically through daily interactions (Figure 6) [44].

Figure 6. Moda Drei Hostel in Istanbul allows prolonged accommodation of digital nomads

4. Digitalized Lifestyles and Temporal Fluidity

Digital devices have become inseparable components of the 21st century's lifestyle. According to Lauren Barack (2021), Americans spend around eight hours per day on digital content, and according to statistical data provided by the University of Westminster on internet usage, ¾ of this time is spent on cell phones and ¼ on computers (Figure 7) [46].
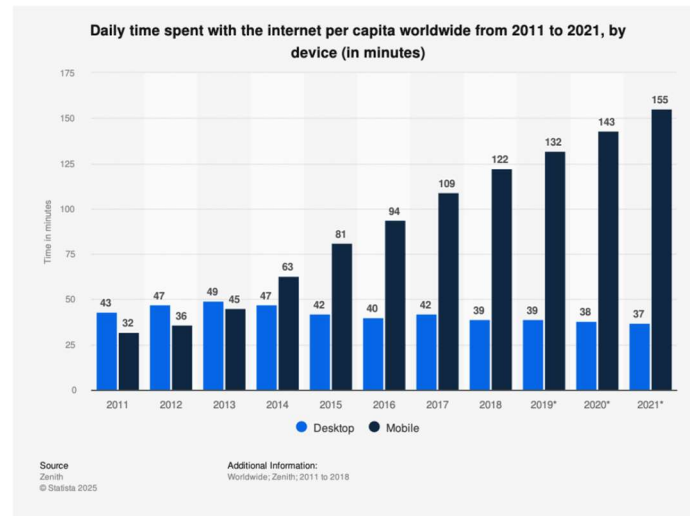
Figure 7. Time spent on digital devices has risen significantly in the recent decade [47]

It seems that digitalization is about to stay as a permanent part of our daily life, and future generations will probably spend even more time on digital devices. The question is, does the traditional way of space making fulfill requirements for such extensive use of digital screens? Don't we need to take this huge shift in the design of physical spaces? In order to answer these questions, we must examine not only how digitalization has changed our spatial needs but also how it has fundamentally altered our temporal patterns of living. Digital connectivity has dissolved traditional boundaries between day and night, work and rest, and local and global time. This temporal transformation is particularly evident in shared living spaces, where residents often operate on different schedules dictated by their connection to digital networks rather than local solar rhythms.

The integration of nighttime urban rhythms has become increasingly crucial in the design of shared living spaces, particularly as digital connectivity reshapes traditional temporal boundaries. As Melbin (1987) notes in "Night as Frontier", cities have historically treated nighttime as a secondary phase, but the rise of global digital work has challenged this paradigm [48]. Studies on nighttime dynamics reveal how temporal accessibility affects the livability of cities, particularly for digital nomads and remote workers operating across multiple time zones [49, 50]. In such environments, individuals create what Koslofsky (2011) describes as "temporal communities" that function independently of local daylight patterns [51]. Building on analyses of nightlife's role in urban livability, shared spaces must account for factors such as 24-hour accessibility, sound isolation for asynchronous activities, and adaptable lighting systems that support both day and night uses. The success of spaces like The Collective in London demonstrates how thoughtful integration of nighttime needs, through features like sound-proofed work pods, all-hours communal kitchens, and gradient lighting systems, can support diverse temporal patterns of use. This temporal flexibility is particularly vital in co-living environments where residents may be participating in what Castells (2000) describes as the "space of flows", where global digital networks create new patterns of activity that transcend traditional day-night cycles [52].

4.1 Freelancing and Remote Work at Home

The intersection of technology, privacy, and domestic space has become increasingly complex in contemporary architecture and living patterns. Rem Koolhaas's (2015) critique of smart home technologies highlights what Sadowski (2020) terms the "privacy-convenience paradox" in modern domestic environments. This technological infiltration of living spaces has taken on new significance in the context of remote work, creating what Nagy and Neff (2015) describe as "hybrid domestic-professional environments" [53-55].

The COVID-19 pandemic accelerated this transformation, as documented by Thompson's New York Times analysis, revealing the challenges of balancing professional productivity with domestic life. These challenges manifest differently across various housing typologies - from single-family homes to urban apartments - highlighting what Oldenburg and Brissett (2017) identify as the "spatial inequality of remote work capability" [56].

Deborah Berke's emphasis on multi-functional spaces reflects what Hollis (2019) terms "programmatic flexibility" in contemporary domestic architecture [57]. However, proposed solutions like buried workspaces or isolated pods often fail to address what Marcus (2020) identifies as the "socio-spatial complexity" of modern living arrangements [58]. These solutions particularly overlook the constraints faced by apartment dwellers, who represent an increasing proportion of urban populations globally [59].

The convergence of Koolhaas's privacy concerns with the practical challenges of remote work presents a complex design challenge (Figure 8). As Aurigi and Cindio (2016) note, the integration of smart technologies in domestic spaces must balance surveillance capabilities with the growing need for flexible, multi-use environments that can accommodate work, family life, and privacy needs [60]. The proliferation of remote work has increased demand for flexible, furnished housing units in urban centers [61].

Proposed solutions vary from an isolated working space buried in the ground (Figure 9) to a Work pod (Figure 10), but none seems to face the real problems of co-existence of work and family and provide a sustainable solution. The biggest problem with the buried case is that it's not feasible for apartment dwellers, which is the most common form of dwelling in contemporary cities.

Figure 8. Illustration by Max Guther published in The New York Times Magazine reflects a common condition many remote workers experienced during COVID-19 quarantines [62]

Figure 9. 'Buried Studio' by Igor Leal imagines a sunken garden office in Rio de Janeiro [63]

Figure 10. Work Pod by Autonomous is a prefabricated office pod that can be assembled in one day [64]

4.2 Toward Urban Pause Spaces

The value proposition of shared living spaces extends beyond mere accommodation. These environments create what Maalsen (2020) terms "third spaces" - areas that bridge the gap between private residences and public domains [65]. Traditional urban spaces, including cafes and restaurants, were not designed to accommodate the growing demand for casual workspaces, creating what Gibson (2016) identifies as a "spatial mismatch" between urban infrastructure and contemporary work patterns [66]. This mismatch points to an emerging need for what could be termed "urban pause spaces" - semi-public areas that provide specific spatial qualities mentioned below. These key characteristics need to be considered by architects and urban designers to fulfill the need for more digital and internet-friendly spaces;

• Acoustic buffering from pedestrian traffic,

• Wi-Fi and electricity connectivity,

• Flexible or digital-work friendly urban furniture,

• Proximity to urban amenities,

• Flexible temporal use of spaces,

• Security and protection from weather conditions.

While this article does not propose a prescriptive set of design guidelines, the emerging notion of "urban pause spaces" suggests several spatial qualities worthy of further exploration. These characteristics point to a hybrid typology that merges the domestic, professional, and communal, offering a flexible and responsive framework rather than fixed prescriptions. These intermediate spaces would serve as what Gehl (2011) describes as "soft edges" in the urban fabric, providing transitional zones between fully public and private spaces [67].

5. Conclusion and Future Studies

The intersection of digital connectivity, remote work, and evolving social patterns is fundamentally transforming our understanding and use of residential spaces. This transformation represents a paradigm shift in how we conceptualize, design, and interact with living environments in the twenty-first century. Our analysis reveals several key findings that have significant implications for architectural design, urban planning, and social organization.

First, the emergence of hybrid living spaces - environments that seamlessly integrate work, leisure, and social activities - represents more than a temporary response to the COVID-19 pandemic. Rather, it signals a fundamental shift in spatial requirements driven by technological advancement and changing work patterns. The successful integration of these functions requires careful consideration of acoustic privacy, visual connectivity, and spatial flexibility, moving beyond simplistic solutions like isolated work pods or open-plan layouts.

Second, the rise of shared living arrangements, from co-living spaces to long-term hostel residencies, reflects broader societal shifts in how people conceptualize 'home' and 'permanence'. These new residential patterns challenge traditional architectural paradigms and suggest the need for more fluid, adaptable spatial organizations that can accommodate diverse user needs and temporal patterns of occupation. The success of such spaces depends heavily on the thoughtful design of communal areas and the creation of what we term "urban pause spaces" - semi-public areas that facilitate both social interaction and focused work.

Third, the digitalization of daily life has created new demands for what we identify as "digital-friendly spaces". These environments must balance multiple considerations:

• Flexible layouts that accommodate evolving technological needs

• Proper lighting conditions for screen-based work

• Visual depth variations to support eye health

• Sound isolation for virtual communications

• Access to outdoor spaces for physical and mental well-being

Fourth and perhaps most significantly, our research indicates that the future of residential design lies in what we term "post-pandemic hybridism" - a design philosophy that acknowledges the permanent integration of digital connectivity and remote work into domestic life while preserving the fundamental human needs for privacy, community, and connection to the natural environment. This approach suggests a move away from dense urban centers toward more distributed living patterns, challenging long-held assumptions about urbanization and density. Post-pandemic hybridism differs from earlier live-work housing by embedding temporal fluidity, digital infrastructure, and multi-scalar communal integration into residential design.

It is important to recognize that while co-living and hybrid housing models offer innovative responses to changing lifestyles, they also carry potential risks. These include the commodification of community, where shared spaces are marketed as lifestyle products

with premium pricing, as well as the exclusion of lower-income residents from access to digitally equipped, flexible housing. Without careful policy oversight and equitable design strategies, such trends risk exacerbating housing inequalities under the guise of innovation.

Further research is needed to fully understand the long-term implications of these changes, particularly how zoning policies and urban planning frameworks must evolve to support hybrid and shared living patterns. While shared housing models offer flexibility, they also risk commodifying community, raising affordability concerns, and reinforcing exclusion. These tensions must be acknowledged in future architectural and planning responses.

Additionally, future research should investigate how city planning and zoning regulations must evolve to accommodate hybrid living patterns. As digitalization blurs distinctions between home, work, and semi-public space, planning frameworks will need to adapt by supporting mixed-use typologies, flexible occupancies, and innovative co-living models that challenge conventional definitions of density and land use. The traditional separated categories of 'home', 'office', and 'public space' is now melting into a kind of fluidity of functions in a technology-enabled lifestyle. Within this context main concern remains to be fostering genuine human connection and well-being. This represents both a challenge and an opportunity for architects, urban planners, and policymakers to reimagine the built environment for a post-pandemic, digitally connected world.

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