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Beyond virtual reality: The domestication and gentrification of virtual space

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Abstract

This paper examines the domestication of virtual reality (VR) and mixed reality (MR) technologies within the home. It argues that recent advances have reshaped both the spatial and affective character of digital experience. Where earlier iterations of VR sought to transcend physical space, newer VR/MR headsets, such as the Meta Quest 3 and Apple Vision Pro, integrate digital objects into remediated images of the domestic environment. Drawing on theories of placemaking, affective atmospheres, and technological domestication, we explore how MR facilitates hybridised experiences that blend physical and imagined space. We argue that this shift enables more effective domestication by aligning with everyday mobilities and routines. At the same time, we also suggest that this transformation is privileging certain users as well as datafying the home for commercial ends. To account for this shift, we theorise that the virtual space of VR is being gentrified, and that this process is not just reconfiguring how the domestic sphere is experienced but might also displace certain users because of the material properties associated with their homes. We conclude this article by offering a conceptual model that formalises *the gentrification of virtual space*.

Keywords

virtual reality (VR), mixed reality (MR), domestication, gentrification, home, platform capitalism, placemaking, datafication

Introduction

The home is an ambiguous site of shifting meaning (Blunt and Dowling, 2006). Both the people and objects within this setting can influence how it feels (Kajander et al., 2024). Technology is an increasingly important material in this context (Badgett and Folbre, 1999; Olwig, 1998). Yet, the

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relationship between the home and technology is not as straightforward as it might initially seem (Lehtonen, 2003). The 'domestication of technology' is a theory that describes how new technologies are incorporated into the home through ongoing negotiations (Neville, 2021). Although these negotiations, of course, involve users, early explanations mainly focused on the technologies themselves (Rogers, 2003). This focus has gradually shifted as scholars have started to appreciate the active role users play in this process (Hargreaves et al., 2018). Equally, the landscape beneath these technologies has also changed.

Today, the digital environment is increasingly shaped by powerful companies that design platforms to increase their control and reach (Evans et al., 2022; Zuboff, 2019). Accordingly, it is not just technologies that users negotiate, but also the power structures that underpin them (Evans, 2018). Nonetheless, judgements about the suitability of new technologies routinely hinge around whether these devices outwardly improve domestic life by making routine tasks more convenient (Venkatesh, 2008). This is not to suggest, of course, that all technologies necessarily seek to augment our relationship with the home (Cross, 2020). For some technologies, the associated hype that surrounds them actively involves the possibility for transcending this environment (Heim, 1993; Vince, 2011).

Virtual reality (VR) is a good case in point (LaValle, 2023). The initial enthusiasm surrounding early articulations of VR routinely concentrated on its ability to provide users with the sensation of 'being there' in a setting that differed from their concrete surroundings (Bailenson, 2018). In contrast, more recent VR headsets like the Quest 3 and Apple Vision Pro are no longer as concentrated on evading physical space per se (Vince, 2011) but rather seamlessly blending this environment with a suite of digital objects (Greengard, 2019).

Within this mixed reality (MR), as it is termed, the distance between the physical and the digital has evidently decreased (Speicher et al., 2019). To be clear, this advancement is not a neutral process (Saker and Frith, 2022). Instead, it reflects wider trends associated with platform capitalism (Evans, 2018) – where the home is progressively framed as a space replete with data to be commercially exploited (Lingel, 2021; Zuboff, 2019). To account for this development, we describe recent headsets – such as those mentioned above – as being VR/MR devices. This description highlights the growing blurred distinctions between these categories. In the context of the home (Blunt and Dowling, 2006) and the ongoing domestication of technology (Berker et al., 2005), this is significant for the following two reasons.

First, the physical freedom historically associated with VR has been reframed through VR/MR headsets (Meta, 2025). The mobilities once digitally imagined have been transformed into something more physical that takes place within the boundaries of home (Blunt and Dowling, 2006). These mobilities can be interpreted as placemaking practices that transform how users experience and engage with their surroundings (Pink and Leder Mackley, 2016). This shift, therefore, reflects a different kind of relationship between the home and the virtual space of VR/MR, which holds the potential to make this technology more popular.

Second, the merging of concrete reality with digital objects means that users will experience different versions of the same application or game. This is not the case with earlier headsets, where hardware and software worked together to ensure physical objects did not disrupt the flow of applications (Saker and Frith, 2020). Consequently, the datafication of the home through VR/MR signals a marked advancement of commercialisation within the domestic realm (Evans et al., 2022; Zuboff, 2019). Importantly for the direction of this article, this also means that the physical space of the home – its material properties, such as room size, ceiling height, furniture density, luminance, privacy and potential for rearrangement – will directly affect levels of immersion. In other words, emerging VR/MR experiences might displace certain users precisely because of

their socio-economic conditions. In either case, we propose these consequences can be described as involving *the gentrification of virtual space*, which we formalise as a conceptual model associated with a suite of observable implications.

We build our case for this model in the following way. First, we explore placemaking practices within the home, and how research surrounding affective atmospheres of the home can help us understand how this setting is *felt*. Second, we explore the role that technology increasingly plays in homemaking practices, before reflecting on why early iterations of VR were so difficult to domesticate. Third, we chart how the relationship between the home and VR is beginning to change through the phenomenology of recent VR/MR headsets, which represent a more intertwined relationship between the home and technology. Fourth, we outline how the nascent relationship VR/MR headsets have with physical space is reshaping both the home, as well as the digital space that overlays it. Finally, we formalise our model for *the gentrification of virtual space* by reflecting on the following aspects: constructs, scope conditions, mechanisms, and observable implications.

The home and atmospheres

The home, both as a physical and conceptual space, has been explored by a range of disciplines over the years (Pink and Leder Mackley, 2016). During the 1970s, for example, human geographers positioned the domestic realm as something subjectively experienced that facilitated an authentic sense of belonging (Kajander et al., 2024). By the 1990s, however, this idealised conception of the home was beginning to change (see Sibley, 1995; Young, 1997). As Brickell (2012: 26) explains, '[most] critics took exception to, and focused their arguments on, one or more of the binary oppositions (inside/outside, male/female, work/home, public/private, safe/unsafe) underpinning a once purely optimistic notion of home'.

In a relatively short period, then, this once private setting was 'no longer considered a space beyond turbulences, but a place of constant negotiation' (Miller, 2001: 4). Perhaps more importantly, the home was increasingly interpreted as a construct. This shift is exemplified by Blunt and Dowling's (2006) seminal text, *Critical Geographies of Home*. As the authors comment (2006: 23), the '[home] does not simply exist, but is made', and this making occurs through a confluence of physical objects, as well as what this space is imagined to be. Accordingly, homemaking is not a singular event per se (Su, 2024), but 'continually created and re-created through everyday homemaking practices, which are themselves tied to spatial imaginaries of home' (Blunt and Dowling, 2006: 254). In turn, we would suggest such a comprehension evokes Dufrenne's (1973 [1953]) understanding of 'atmospheres' and their relation to everyday life, as we will go on to explain.

These 'atmospheres' refer to those feelings that exceed the limits of language – those feelings that are 'perpetually forming and deforming, appearing and disappearing, as bodies enter into relation with one another' (Anderson, 2009: 79). Much like the understanding of the home developed above (Pink and Leder Mackley, 2016), atmospheres do not simply exist, nor can they be attributed to that which is purely physical. Instead, atmospheres occupy a more enigmatic state (Böhme, 1993). They emerge amidst people and objects, as a bodily experience sensed in time. The making of atmospheres is, therefore, not simply performed by designers (see Ingold, 2013) but also occurs through the behaviours and activities of people (see Ingold, 2013; Pink and Leder Mackley, 2016). Such 'aesthetic work', as it is referred, 'consists of giving things, environments or also the human being such properties from which something can proceed' (Böhme, 1993: 123). Importantly for this article, Pink and Leder Mackley (2016: 176) contextualise this process within the very environments that comprise daily life – the home – which is constructed through a 'world of active materials'.

The purpose of invoking atmospheres is not merely descriptive but conceptual: atmospheres help us grasp how homes are *felt* and lived as spaces that exist between the physical and the imagined. As Anderson (2009: 79) elaborates, 'what is common across these approximations is that an atmosphere is a singular affective quality. And through this affective quality, the aesthetic object creates an intensive space–time. One that exceeds lived or conceived space–time'. Atmospheres are central to understanding the ambiguity of the home – not just as a material setting, but as an affective and spatial imaginary continually shaped through use. They offer a suitable way of exploring how placemaking unfolds, not through fixed arrangements, but instead ongoing affective interactions between bodies, technologies, and space. It is precisely this framework that allows us to eventually interpret VR/MR as a different kind of 'affective material' that facilitates a distinct placemaking practice through its blending of digital imaginaries and domestic physicalities.

In the following section, we continue to build on this affective comprehension of homemaking by turning to the critical role technologies play within the co-constitution of this setting.

The home and technology

The inclusion of technology within the home, and its subsequent impact, is understandably an established area of study (Deschamps-Sonsino, 2018). Today, many households pick and choose from a range of home-based technologies, just as they would other items, such as clothing, cars, groceries and so on. Likewise, the inclusion of technologies within this space has precipitated surrounding discussions about how homes are effectively being rendered 'smarter'. Indeed, '[visions] of future smart homes … promise to enhance domestic comfort, convenience, security and leisure whilst reducing energy use through optimized home energy management' (Hargreaves et al., 2018: 127). A body of research has coalesced around the manifold challenges allied to delivering this vision (see Cook, 2012; Mennicken et al., 2014; Wilson et al., 2015).

While this might be the case, comparatively little time has been spent reflecting on people and their experience using these technologies (see Hargreaves et al., 2018). Given the active role people evidently play in homemaking practices, such a gap is noteworthy. This dearth can be observed in early research on the 'diffusions of innovations' (Rogers, 2003), which assumed the benefits of technologies would be communicated across society, and it would be those technologies deemed most useful that would be purchased. Benefits in this context are understood in relation to home life. The 'enabling role of technology', as Venkatesh (2008: 391) describes it, articulates the ways in which technologies make certain practices possible. A pertinent example of this can be seen in the impact the internet has had on family life (see Bakardjieva, 2005) by establishing 'new temporalities of media and media consumption' (Irani et al., 2010). In a similar vein, smartphones enabled 'second screen practices' (see Cesar et al., 2009), where devices are employed to 'retrieve personalised content and … interact with others' (Ley et al., 2014: 815). Crucially, the effect of these advancements does not necessarily mean the familial setting is improved. As Turkle (2011) astutely points out, it is precisely through these advancements that households might experience a particular sociality she refers to as being 'alone together' (Turkle, 2011).

At this juncture, we want to emphasise that 'commonly developed ideas of home interactions are being disrupted by social media, connected non-screen-based devices (the Internet of Things), e-commerce, the so-called "gig economy," artificial intelligence (AI), chatbots, blockchain, virtual reality, "Big Data," and other software-enabled trends' (Deschamps-Sonsino, 2018: xv). At the same time, the success of any given advancement is not guaranteed, nor is it simply imposed from above. Instead, technologies move through a process of 'domestication' (see Moores, 1993, 1996; Spigel, 1992). This process actively involves the users (see Rogers, 2003). Such agency, as it might be

described, manifests in how 'an individual or particular family tends to actively evaluate new technology over a period of change and how this occurs in relation to a "moral economy of the household": an individuated set of social values and interests' (Neville, 2021: 1290). These evaluations can also be seen in the decisions made before a particular technology enters the home. An individual or family will decide, for example, whether an advert has convinced them that this technology is either something that they need or not. Furthermore, this process does not simply end when a technology has moved through the stages outlined above. Instead, technological domestication is predicated on 'recurrent renegotiation' (Lehtonen, 2003).

Lehtonen (2003) proposes these renegotiations equate to a series of 'Latourian trials'. Assessments about the familial compatibility of a particular technology are repeatedly appraised within the context of everyday life. This showcases the work that is involved in 'taming' seemingly 'wild' technologies to render them functional within the home (Berker et al., 2005). It is through these experiments that 'technologies and their users co-evolve as technologies enable new routines and identities and are thus given particular functions and meanings' (Hargreaves et al., 2018: 129). In turn, we contend that technological domestication bears meaningful similarities with 'affective atmospheres of the home' outlined above (Pink and Leder Mackley, 2016). This similarity is evident in the unfinished nature of atmospheres, as well as the changing way in which technologies are embedded within the home. While the zenith of domestication might be considered a fixed state – something achieved when technologies become absorbed into the fabric of the home – in reality, this process is never complete (Hargreaves et al., 2018) – regardless of how established some technologies may appear (Lull, 1991). Much like the placemaking that occurs within the home, then, technological domestication requires 'aesthetic work'.

In the next section, we leverage this understanding to reflect on why VR has proven such a difficult technology to domesticate to date, and why things might finally be changing with the shift toward VR/MR headsets (Meta, 2025).

The home and VR

Historically speaking, VR has been a particularly challenging technology to domesticate (Evans, 2018). This difficulty can be inferred by the number of headsets sold in contrast to more established technologies. We suggest this difficulty directly involves the relationship VR has with concrete space – one that distinguishes it from more traditional technologies (Saker and Frith, 2020). This distinction can be observed in both wired and wireless headsets (Saker and Frith, 2019). Regarding the former, pioneering systems such as those released by VPL Research in the 1980s (Wohlgenannt et al., 2020), needed to be physically tethered to large and powerful computers to operate (LaValle, 2023). The relative immobility of associated devices meant that users were cordoned off from their physical surroundings (Evans, 2018; Saker and Frith, 2019, 2020). To enter the space of VR, then, meant directing one's ocular attention to the digital vista configured within the display, while simultaneously suspending one's disbelief (Heim, 1993). Concrete space was something to be transcended (Vince, 2011), rather than incorporated into the experience.

Following this vein, VR deviates from more established 'mediating' and 'transformative' technologies, such as the television – those technologies that occupy a fixed and persistent position within the home (Lull, 1991). Importantly, our enduring relationship with the television highlights the degree to which it has been domesticated. This level of 'taming', of course, has not occurred with VR (Harley, 2020). Logically speaking, it is difficult to domesticate a technology that functions to deny the concrete space beyond itself. However, the relationship between the physical and the digital is changing (Meta, 2025), and so too is the relationship between more recent devices and the home.

The veracity of this point can be observed in the proliferation of untethered devices, such as the Oculus Quest, which was released in 2018. While wearing this headset, users could experience six degrees of movement (6DoF) without requiring powerful computers.

For Saker and Frith (2020), this untethering effectively paved the way for 'coextensive space' to emerge, which occurs when the physical movements performed by users are reflected in the digital display of their devices. While the phenomenological impact of this freedom is undeniable, VR still remained challenging to domesticate – albeit for different reasons. The challenge no longer involved the denial of concrete space per se (Vince, 2011), but the difficulty of incorporating physical movements in spaces where tangible objects were not ocularly included (Greengard, 2019). For individuals to comfortably inhabit this virtual space, users needed to establish a designated play space (see Saker and Frith, 2020). This establishment rested on a confluence of systems including persistent spatial anchors and passthrough technologies (Evans et al., 2022), alongside Simultaneous Localisation and Mapping (SLAM) technology that enabled headsets like the Quest 3 to map an environment, while keeping track of its own coordinates within this setting.

These systems effectively helped users play within a designated space, without physical objects unwittingly disrupting the experience. As a corollary to this, the applications and games that took advantage of this 'coextensive space' frequently required users to operate within spacious environments where they could move freely without fear of breaching this threshold (Saker and Frith, 2020). Engaging with these devices meant disengaging from 'affective atmospheres of the home' (Pink and Leder Mackley, 2016: 176) – albeit in a way more cognisant of their utility. At the same time, this shift introduced a new suite of problems. The environments in which users played VR, for instance, might not be large enough to fully accommodate experiences that required decluttered and well illuminated spaces. The reality of this problem can readily be observed in the growing number of news stories that detail people injuring themselves while playing VR games at home (Rebenitsch and Owen, 2016). These stories touched on two important points.

First, when it comes to VR, physical space is always present – however dislocated it might appear (Saker and Frith, 2019). Second, and more relevant to this discussion, these incidents showcase that atmospheres of the home (Pink and Leder Mackley, 2016) are inextricably associated with physical movement and mobility. To underline this connection between homes and movement, Pink and Leder Mackley (2016) draw on Urry's (Urry 2007: 73, cited in Pink and Leder Mackley, 2016: 176) suggestion that atmospheres are 'sensed … through movement and experienced in a tactile kind of way. While this connection between atmospheres and movement is evidently important, it has received limited scholarly attention' (see Ferguson 2010; Pink 2012). For Pink and Leder Mackley (2016: 176), this is critical precisely because it determines 'movement as a site of making and thus as potentially a site for co-design … in the ongoing experience and production/making of the affective atmospheres of home'. In other words, just as the home emerges through routine movement (Ingold, 2008; Pink and Leder Mackley, 2016), these mobilities combine to configure affective atmospheres (Pink and Leder Mackley, 2016).

At this juncture, it is helpful to reflect on the various ways in which technologies as 'affective objects' interlace placemaking practices predicated on mobilities. Technology can evidently transform how the home is experienced (Venkatesh, 2008). The television, for instance, can slow placemaking practices down, just as it can speed them up. In either case, the television and its role in the home are seemingly configured through mobilities. In contrast, the appeal of VR to date has routinely revolved around the unique experience of 'being there' (Bailenson, 2018) with the 'there' in this instance not explicitly incorporating the concrete space of the home, but rather prioritising the digital space of VR. To reiterate, newer headsets, such as the Meta Quest 3 and Apple Vision Pro, are balancing this division.

These devices are primarily advertised as offering mixed reality (MR) experiences, where an array of advanced cameras mediate an image of concrete space into the headset, which then provides the necessary conditions for digital objects to overlay this remediated setting (Greengard, 2019). Importantly, it is precisely the development of MR that is creating the necessary conditions for VR to embark upon a period of domestication that will likely be more successful than previous versions of this technology. However, it is also our contention that this success might come at a cost, and this cost could involve *the gentrification of virtual space*, as we term it.

In the following section, we bring these observations together by exploring the phenomenology of this shift, and how it might signal the continued advancement of commercialisation within the domestic realm (Zuboff, 2019).

The home and VR as mixed reality

The phenomenology of VR is evidently changing (Speicher et al., 2019). Recent VR/MR headsets are predicated on a more balanced relationship between the physical and digital (Saker and Frith, 2020). In doing so, VR/MR seemingly occupies a space that was once reserved for augmented reality (AR) (see Arena et al., 2022; Evans, 2018). Symptomatic of this shift, related devices are enjoying a degree of popularity that exceeds previous iterations of this technology (see Aviles-Castillo et al., 2025). It seems reasonable to suggest that VR/MR may very well be on the verge of becoming a viable consumer technology (Evans et al., 2022). For the purpose of this article, it is also our position that the mounting success of this technology is precisely rooted in the nuanced relationship recent headsets exhibit between physical and digital space (Meta, 2025), as well as the placemaking practices this advancement permits. Let us unpack this connection.

VR/MR devices – exemplified by the Quest 3 and the Apple Vision Pro – are implicitly marketed as enabling users to experience a distinctive version of their homes through the inclusion of digital objects that overlay a remediated image of their concrete environment (Meta, 2025). Unlike the former generation of wireless headsets, such as the Quest, for instance, updated versions of this technology explicitly utilise the physicality of the home as a canvas for digital experiences to play out. VR/MR doesn't function through the denial of the physical setting that facilitates it (Meta, 2025) – quite the opposite. Instead, concrete reality is radically accepted as an enduring aspect of the virtual space associated with this generation of devices. This is a marked development in the history of VR that warrants attention (Evans, 2018).

Following this, the home – both in its physical and imagined form (Blunt and Dowling, 2006) – can be interlaced with a rising number of MR games and experiences that do not digitally seek to overshadow the physical but instead establish a more symbiotic relationship between these aspects. This phenomenological reimagining effectively sutures the physical and digital into one cohesive experience. As a result, this reshaping of the home outwardly exceeds the capability of more traditional technologies. Take the television, for instance, though this clearly permits families to engage with a variety of media flows (Lull, 1991), and these flows do have the power to transform the sociality of the domestic realm (Venkatesh, 2008), the structure of the home – visually speaking – remains unbroken. The same cannot be said of VR/MR. The phenomenology of VR/MR is explicitly contingent on the concrete environments it blends with and vice versa. Different rooms, sizes and layouts necessarily produce different experiences. It is this 'inbetweenness' that we suggest permits VR/MR to produce a different kind of 'place-making' within the home (Brickell, 2012).

On the one hand, the last generation of wireless VR was notably more cognisant of concrete space than earlier headsets (Saker and Frith, 2020). On the other, this cognisance was utilised to safeguard physical space disrupting immersion rather than deepening it. Consequently, the mobilities associated with the likes of Quest were necessarily restricted. In contrast, the virtual space underpinning VR/MR is more dynamic, expansive and inhabitable. Crucially, denial no longer implicates the physical realm per se, but rather the act of mediation itself. Indeed, within this setting, users can move through their homes, as if they were not in virtual space – as if they were experiencing an unmediated version of their surroundings. As a corollary to this shift, 'routines of home' (Pink and Leder Mackley, 2016: 178) are increasingly commensurate with the mobilities of these devices. Notably, this means the home is no longer required to accommodate a technology that denies its existence, as the fidelity of this setting is an innate aspect of the virtual space that enables VR/MR to function.

Perhaps more importantly, it is precisely this symbiosis that means VR/MR is primed for domestication in a manner that surpasses more traditional technologies. While traditional technologies commonly occupy a fixed space within the home, it is the home that effectively occupies a space within VR/MR. Yet, within VR/MR the home does not occupy a fixed space *per* se but rather co-extends through the mobilities this technology facilitates (Saker and Frith, 2020) – mobilities that are directly related to the kind of homemaking activities detailed above. Crucially, this also appears to be altering what the digital space underpinning VR means and what it offers (Evans, 2018); shifting it from a space of physical transcendence to a technology that effectively reinforces the spatial restrictions of concrete space, as well as priming these environments for digital commerce and control (Zuboff, 2019). To emphasise the impact of this shift, we propose this process can be understood as a form of 'technological gentrification' (see Lingel, 2021). Let us unpack this concept by first turning to gentrification.

In the main, gentrification commonly refers to the development of certain areas to increase profits. Likewise, it can indicate long-term residents gradually being priced out of their neighbourhood as newcomers move in. In either case, gentrification is commonly navigated in terms of the effect it has on physical environments (Lingel, 2021). While such observations, of course, remain important, our focus is technological gentrification, which can be considered along both physical and digital lines. Physically speaking, the impact of the internet can be observed in the various ways the surrounding tech industry has modified neighbourhoods without considering whether these changes are desirable for locals (Florida, 2017). Digitally speaking, it can also be witnessed in related anxieties involving digital spaces. As Lingel (2021) comments, 'Big Tech' companies such as Meta and Google, do not simply own extensive physical space, but more worryingly control considerable proportions of online technologies, and, therefore, the social media users who engage with their applications. Because of this, smaller companies and platforms have been progressively displaced. So much so that it seems fair to suggest that the internet is no longer as firmly aligned with the kind of decentralisation and empowerment it once was (Couldry and Mejias, 2019).

Today, mainstream platforms outwardly decide what counts as normative online interactions. As Lingel (2021: 2) puts it, '[condensing] this much control goes beyond a reduction of consumer choice; it's a form of technological gentrification' that involves three aspects, (1) displacement (i.e., fewer companies operate in this space), (2) isolation (i.e., algorithms isolate individuals) and (3) commercialisation (decisions are made in the service of profit rather than social consequences). Using this model as a point of departure, and while drawing on the conceptual arc of our article, it is our contention that advancements in VR/MR are leading to *the gentrification of virtual space.* In the section that follows, we formalise this conceptual model regarding its constructs, scope conditions, mechanisms, and observable implications.

The gentrification of virtual space

The gentrification of virtual space is best understood as a conceptual model that hinges around material, technical, socio-economic and affective conditions. The function of this model, therefore, is to specify the constructs, scope conditions, mechanisms, and observable implications through which we posit VR/MR's domestication can be analysed and evaluated across contexts, rather than offer an empirical typology. At its core, lies the suggestion that recent VR/MR headsets do not simply operate within the domestic realm, but actively reconstitute this environment as a hybrid space predicated on the entanglement of physical and computational architecture with platform power (Evans, 2018; Evans et al., 2022; Saker and Frith, 2020, 2022). Consequently, it is not our intention for this model to account for the virtual space once associated with the seminal headsets detailed above (see Heim, 1993; Vince, 2011), as this space did not involve the kind of mobilities associated with recent devices (Evans, 2018; Evans et al., 2022; Saker and Frith, 2020, 2022). Instead, this model is relevant for those VR/MR experiences that involve users moving through the physical contours of their homes that have been digitally augmented through these systems.

To be clear, this advancement is rooted in the material properties of the home itself. This includes aspects such as room size, ceiling height, furniture density, luminance, privacy and potential for rearrangement, which are factors explicitly related to how domestic life is both imagined and lived (Blunt and Dowling, 2006; Pink and Leder Mackley, 2016). What separates recent VR/MR devices from older systems is the fact these enduring features of the domestic sphere are not absent from related experiences when headsets are worn – quite the opposite – but are explicitly operationalised through the phenomenology of newer and more immersive systems. Via emerging computational systems such as persistent spatial anchors, passthrough technologies (Evans et al., 2022), and Simultaneous Localisation and Mapping (SLAM) technology, the physicality of the home is effectively transformed into a contiguous environment (Saker and Frith, 2022) that is both digitally navigable and knowable (Evans et al., 2022). In short, then, the domestic environment is altered through this relationship. While walls, floors, light sources and obstacles were once interpreted as relatively passive (Heim, 1993), these aspects are now incorporated into the logic of VR/MR technologies, which enable applications and games to treat concrete space as a blindable substrate for interaction, rather than a neutral container.

Importantly, these material and technical properties are inextricably linked to the socio-economic conditions of its residents, as they will likely reflect a suite of inequalities associated with housing quality, available space and autonomy. Equally, these conditions intersect with the economic threshold required to fully participate in VR/MR environments. This includes the cost associated with recent VR/MR headsets, as well as the broadband speeds needed to properly inhabit immersive applications and games and allow them to function as designed (Evans et al., 2022). In this vein, participation is not only stratified by access to the necessary technologies, but also the degree to which any given home can satisfy the spatial and technical assumptions that are increasingly embedded in VR/MR systems. At the same time, it is precisely through this design that recent VR/MR headsets are engendering new atmospheric formations within the home that build on our understanding of homemaking as an affective and material practice outlined above (Böhme, 1993; Pink and Leder Mackley, 2016). Indeed, it is our contention that the overlay of digital objects increasingly harmonises with the contours of concrete space, affective atmospheres will not simply emerge through the ocular sense *per se*, but as an embodied and spatialised experience predicated on the domestic sphere itself. In this sense, and breaking from older systems (Vince, 2011), the phenomenology of the home will be stabilised between its materiality and the computational architecture of VR/MR platforms.

Following this, *the gentrification of virtual space* emerges across this physical and digital proximity. While earlier forms of VR attempted to shift users away from their surroundings (Heim, 1993; Vince, 2011), contemporary VR/MR systems reassert the home as the primary site of immersion (Evans, 2018; Saker and Frith, 2020). As applications and games become better equipped to utilise more expansive environments, it seems likely that a disparity rooted in material properties will intensify. Larger, well-lit homes with more open spaces will facilitate smoother unbroken experiences, while smaller homes will be hindered by physical intrusions that fracture immersion. Crucially, we suggest that the outcome of this shift will not be interpreted as explicit exclusion through software design, but rather the unintended consequences of technical optimisation. As VR/MR systems continue to function better within certain material and technical conditions, inequality will be reproduced through experiential quality as opposed to formal access.

In all instances, this process is reinforced by the commercialisation of domestic space. Successful VR/MR exceeds the overlay of this setting with digital information, encompassing the datafication of the domestic realm within the virtual space of VR/MR. In the context of home and placemaking, this is significant. As detailed above, atmospheres provide a conceptual way of considering how domestic spaces are felt (Pink and Leder Mackley, 2016). This technology provides the necessary conditions for domestic environments to be remediated as digital imaginaries. Accordingly, this relationship isn't simply cerebral but phenomenological – it is realised through a technology that draws the physical and digital closer together. In turn, the home becomes an interface whose atmospheres and placemaking mobilities are governable through application and game choices, which are indistinguishable from the interests of platforms who have a direct interest in rendering all aspects of the home as commercial endeavours. Immersion is, therefore, not a sensory or cognitive state per se, but is something commercially organised to align the domestic sphere with the commercial interests of platforms. Moreover, these dynamics are intensified by platform enclosure. Let us explain.

The virtual space of VR/MR is increasingly controlled by a very small number of companies, most notably Meta. This kind of monopolisation, of course, raises serious concerns. Over the years, Meta has been associated with a suite of consumer rights, data and privacy controversies (See Evans et al., 2022; Saker and Frith, 2022). Although many of these controversies are related to Meta's social networking site, Facebook, this demonstrates the kind of power Meta could wield within the space of VR. Regarding Meta's dominance, associated atmospheres and placemaking practices, configured through VR/MR might be allied with data from its social networking sites, which could be folded into additional configurations of control and surveillance (Zuboff, 2019). From this position, then, *the gentrification of virtual space* means that VR/MR no longer offers the possibility escape or physical transcendence per se but instead rebuilds the home as an environment in which users experience a more pervasive form of platform enclosure that far exceeds the capability of more traditional technologies.

If our model for *the gentrification of virtual space* holds, it implies a series of patterned and observable outcomes across domestic dimensions. Users within homes that approximate the spatial assumptions embedded in VR/MR design, such as those with open-plan layouts, consistent illumination, and unobstructed floorspace, should support more stable and continuous use than compact or highly constrained environments. In contrast, those users in smaller or cluttered homes will likely experience discomfort and disruption to immersion because of interruptions to passthrough fidelity, boundary mapping, or spatial anchoring. Over time, software design is likely to normalise particular domestic ideals, implicitly scripting an 'optimal home' through interface prompts, boundary warnings, room-setup tutorials, and recommended play spaces. And this will likely narrow the range of homes for which high-end VR/MR experiences are practically viable, even where access to

hardware is outwardly equal. Exclusion will, therefore, emerge indirectly through the same kind of negotiations that characterise technological domestication (Berker et al., 2005; Hargreaves et al., 2018; Lehtonen, 2003), rather than explicit design barriers. Users may not be locked out of applications, but may nonetheless disengage due to diminished experiential quality, physical discomfort, or repeated interruptions. This mirrors the soft displacement associated with urban gentrification. Finally, as spatial data generated through VR/MR systems become increasingly interoperable with wider platform infrastructure – allowing domestic layouts, movement patterns, and affective responses to be folded into broader regimes of surveillance, optimisation, and monetisation – *the gentrification of virtual space* will extend platform enclosure deeper into the intimate geographies of the home.

Conclusion

This article has argued that the contemporary domestication of VR is inseparable from a deeper reconfiguration of domestic space itself. Historically, VR struggled to integrate into everyday life not simply because of technical limitations, but because its promise of transcendence sat uneasily with the affective, spatial, and moral economies of the home (Evans, 2018; Saker and Frith, 2019; Silverstone et al., 1992). Earlier headsets required users to withdraw from domestic atmospheres, suspending the routines and mobilities through which home is ordinarily made and felt (Pink and Leder Mackley, 2016). In this sense, VR was difficult to domesticate precisely because it denied the spatial and affective contingencies of the environments that sustained it.

The emergence of mixed reality marks a significant break with this trajectory. Rather than positioning the home as an obstacle to immersion, MR reconstitutes it as a co-constitutive element of virtual experience. Through passthrough, spatial anchoring, and real-time mapping, domestic environments are no longer bracketed out but folded into the phenomenology of virtual space (Evans et al., 2022; Speicher et al., 2019). This shift allows VR to align more closely with the routines, movements, and improvisational practices through which home is continually produced (Blunt and Dowling, 2006; Pink and Leder Mackley, 2016). As a result, MR succeeds where earlier iterations of VR faltered by embedding virtual experience within the affective atmospheres of domestic life rather than attempting to escape them.

However, this success is not neutral. By making the material properties of the home central to immersion, VR/MR redistributes access to high-quality virtual experience along existing socio-economic lines. Room size, lighting conditions, spatial flexibility, and the capacity to reorganise domestic environments become implicit prerequisites for full participation. Drawing on Lingel's (2021) account of technological gentrification, this article has conceptualised this process as *the gentrification of virtual space*. In this model, exclusion does not arise through explicit barriers or formal restrictions, but through the gradual privileging of particular domestic configurations that align with the spatial assumptions embedded in VR and MR design.

Crucially, *the gentrification of virtual space* intensifies the commercialisation of the home. As MR systems render domestic environments digitally legible, they transform homes into interfaces whose atmospheres, mobilities, and spatial arrangements can be captured, analysed, and monetised. This development extends dynamics associated with platform capitalism and surveillance deeper into intimate settings that were previously resistant to systematic data extraction (Couldry and Mejias, 2019; Zuboff, 2019). Domestication, in this context, no longer signals the taming of technology by household norms, but a reorganisation of domestic life around the operational logics of platforms (Neville, 2021).

The conceptual contribution of this article lies in showing that MR does not merely add digital layers to domestic space, but actively reshapes how virtual space is produced, valued, and inhabited. By formalising *the gentrification of virtual space* through its constructs, scope conditions, mechanisms, and observable implications, this framework provides a way of analysing how immersion, atmosphere, and access are unevenly distributed as virtual technologies move deeper into everyday life. Future empirical work may test, refine, or contest this model across different domestic and cultural contexts. What is established here, however, is that the convergence of VR/MR and the home marks a decisive shift in the politics of virtual space, one in which the meaning of home itself becomes central to questions of inclusion, control, and value.

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