



In a world where everything has a join, can there ever be a seamless space? Journeying through different applications of seamlessness, I first consider the literal definition of the term seamless, exploring how materiality its self can shape our understanding of seamlessness, whilst also trying to address the seam between user and task within the home and beyond by analysing case studies of projects and TV in their depiction, of an integrated future. This essay examines the ideologies put forward by Frederick Kiesler in 1930s through to the current technological advancements of the present day, such as the internet of things, that looks to integrate technology and everyday tasks for convenience, then finally addressing how seamlessness can be incorporated within future thinking. In this essay I will cover topics such as Correalism, Utopia and Dystopia as well as technological applications such as VR that bridge the gap between the real and fake.

ENDLESS HOUSE

VENNY ROOM

THE INTERNET OF THINGS

“so far, at least, only one mode of spatial experience can be privileged at a given time. And if it's impossible to participate fully in both of these realms at once, one of them must lose out.”²

“An unorthodox use of materials and space would introduce eroticism and interuterine motivations into a home that could ‘push forcefully [its] inhabitant into the centre of the ultimate theatre where he becomes everything..”¹

“With strange misalignments and glitches fundamentally changing our domestic rituals our sense of privacy and our social norms”³

SEAMLESS SPACE

168 HOURS IN VR

Leah Roberts
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Interior
Architecture

¹ ‘push forcefully [its] inhabitant into the centre of the ultimate theatre where he becomes everything...’(Matta.E 1938 pg. 43) cited by Fijalkowski, K 2004.

² Greenfield, A. 2018 ‘Radical Technologies: The Design of Everyday Life’. Verso. pg. 56

³ Deezen. (2020). Swapping video calls for VR will change our homes forever says Space Popular. Available at: https://www.youtube.com/watch?v=kxU3v1VEP34&feature=emb_logo. (26/10/2020)

ABSTRACT:

In a world where everything has a join, can there ever be a seamless space? Journeying through different applications of seamlessness, I first consider the literal definition of the term seamless, exploring how materiality its self can shape our understanding of seamlessness, whist also trying to address the seam between user and task within the home and beyond by analysing case studies of projects and TV in their depiction, of an integrated future. This essay examines the ideologies put forward by Frederick Kiesler in 1930s through to the current technological advancements of the present day, such as the internet of things, that looks to integrate technology and everyday tasks for convenience, then finally addressing how seamlessness can be incorporated within future thinking. In this essay I will cover topics such as Correalism, Utopia and Dystopia as well as technological applications such as VR that bridge the gap between the real and fake.

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Introduction:

In this writing, I will explore past and present applications of how space can be inhabited seamlessly within the home and beyond, whilst also considering possible applications of seamlessness within the future. Seamlessness, when discussing it in relation to a past home could perhaps be a more literal application, through materiality, with Frederick Kiesler's "The Endless house " being one example of the case studies I will explore in the first chapter titled, "**Smart before 'Smart'**". In this chapter I will also discuss Kiesler's ideas including Correalism and Biotechnology, that explores the relationship with man/environment/ technology, which Kiesler understood as essential to creating seamless applications within the built environment. Rounding off the chapter I apply this thinking to the present, once again touching on examples such as the architecture machine group/MIT Media lab and the modern day conveniences that have afforded us the luxury of what we now know as a 'Smart' Home which feeds into the relationship between seamlessness and integrated technology. The middle chapter titled "**Glitch - The Seam in between**" explores the idea of the glitch. In this chapter, I seek to outline how digital worlds overlay physical ones, and in that thinking the glitch is the seam in which these worlds meet, using the work of Space Popular, "The Venn

Room" and Jak Wilmot ,a gamer who spent 168hrs in VR as examples in my thinking. The Final Chapter, "**The Future- What if?**" looks to address the future and the possibilities of seamlessness through exploring how TV, has shaped a dystopian portrayal of the integration of technology in the future, using 'Black Mirror' a series written by Charlie Brooker, as an example. This chapter also highlights how privacy could be seen as a seam between us and achieving true seamlessness. Finishing off with the conclusion "**To What End..?**" I pose questions to you, the reader, to think further about this thinking of seamless living. The purpose of this writing is not to find an answer, but to raise questions to how we, as users, think about space and seamless living.

Smart, before
'Smart' ?

In this chapter I will discuss the work of Frank Kiesler¹, namely in the “Space House” (see figure 1) for Utopian technological possibilities and “the Endless house” (see figure 2) for material manifestations. Both projects embodied his thinking of a seamless space. He theorized the use of a continuous surface that can expand and contract in line with a user, believing that “The house was not to be fixed in time but was intended to transform to changes in the human dwelling keyed to the evolving necessities of the inhabitant.”². Throughout the chapter I will consider his thinking as the smart before ‘smart’ and as I analyze various sources of his work and others, I will begin to gather a sense of what seamless design in a home could mean in its material and technological manifestations as well as the role of ubiquitous computing in what we consider ‘smart’ today.

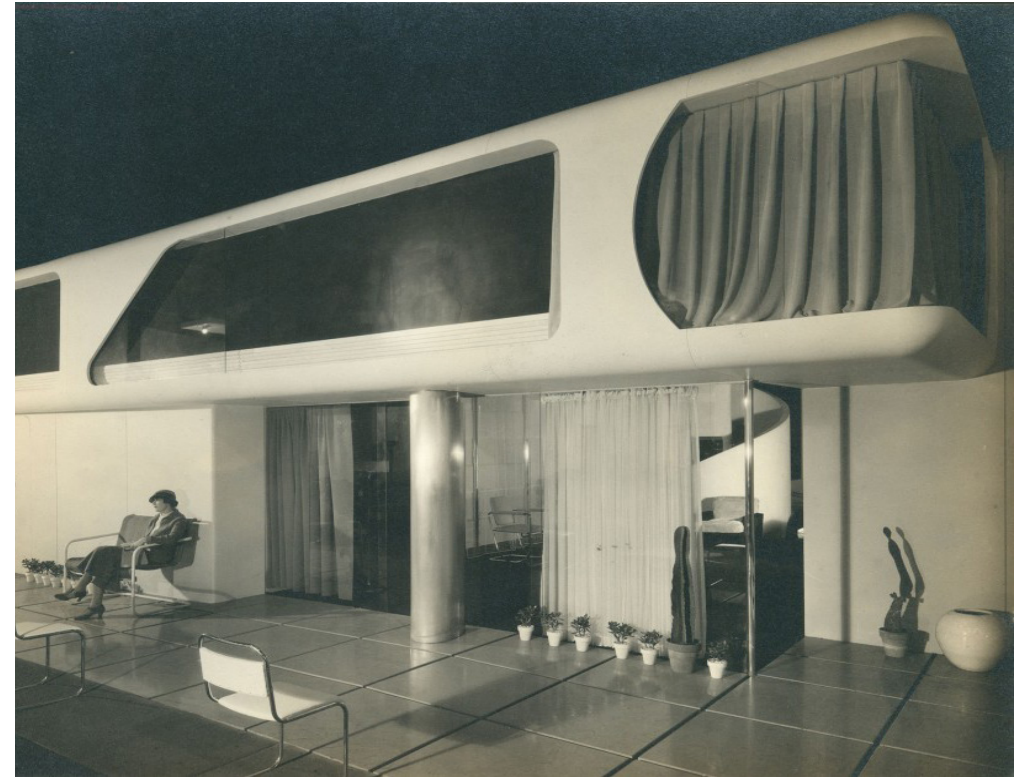


Figure 1(Right): The Space house,
Frederick Kiesler, Space House,
Showroom of the Modernage Furniture
company,

1 Dutch American Architect

2 Phillips, S. 2017. Elastic Architecture: Frederick Kiesler and Design Research in the First Age of Robotic Culture. The MIT Press.



Figure 2: The Endless House, photo of model

Kiesler dabbled in multiple fields of study and was intrigued by the relationship between humans and the world around. As an architect though he never really realized his projects, but I believe his ideas could hold some resonance today. The Space House for example, “was the first attempt to heal mind, body, and soul from the traumatic events of everyday life”³. This transformation of the domestic interior was a running theme throughout his projects as he believed in replicating the intrauterine qualities as the meaning of home, is one that should elicit a sense of security. An example of this is in the “Endless

3 ibid

house”, where it was formed of one continuous surface (see figure 3), ‘seamless’ if you will. Kiesler’s thinking of the Endless house were that it should be “endless like the human body—there is no beginning and no end.”⁴. What I find fascinating about delving into this realm of seamless space is Kiesler’s ambition to draw connections between multiples fields of study in hopes to create a better understanding and intuition when designing in an architectural or design field, that were outlined in his essay: *On Correalism and Biotechnique*⁵.

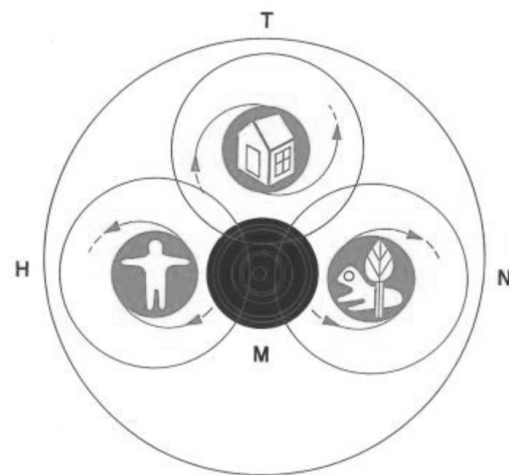
4 Kiesler, F. (1938)

5 On Correalism and Biotechnique: A Definition and Test of a New Approach to Building Design, 1938



Figure 3 (above): Endless House in construction by Kiesler

Figure 4 (right): Man = heredity + environment, 1939. Drawing.
H = Human environment; N = Natural environment; T = Technological environment; M = Man.



In the essay, he gave a name to “This exchange of interacting forces I call CO-REALITY, and the science of its relationships, CORREALISM. The term “Correalism” expresses the dynamics of continual interaction between man and his natural and technological environments.”⁶ . He demonstrated this in the Venn diagram (see figure 4) where he categorized these into three different elements: nature, human and technology. This interplay is one that has been explored throughout various mediums of writing from philosophers to psychologists alike. Larry D. Busbea analyses Kiesler’s work further as it is “What scientists considered before as substance shaped into forms, and consequently understood as tangible objects, is now recognized as energies and their dynamic organization.”⁷ It was the dynamics of movement and user in time that drove his studies in Correalism. Time is a reoccurring aspect of a seamless space and one that is mentioned throughout the segments of this essay.

A good tool is an invisible tool. By invisible, I mean that the tool does not intrude on your consciousness; you focus on the task, not the tool.⁸

⁶ Kiesler, F. (1939). On Correalism and Biotechnology. A Definition and Test of a New Approach to Building Design. *Architectural Record*. Pg. 60-75

⁷ Busbea, Larry D. (2019). *The Responsive Environment: Design, Aesthetics, and the Human in the 1970s*. University of Minnesota Press

⁸ Weiser, M. (1994). *Creating the invisible interface: (Invited talks)*. UIST '94, 1994

‘Smart’- The Realm of Ubiquitous Computing

So, yes, designing in a more biotechnique way could draw us more into seamless space design but when factoring in modern day technological conveniences have we gone too far that this is no longer possible? Sure, Kiesler’s utopian vision for a never-ending space encompasses the ideas we can see in ‘smart home’ design to this day, and the somewhat already mediated possibilities should appeal to everyone but in reality, it isn’t for all. For decades, artificial intelligence has both been predicted, researched and adopted as a way to manifest seamless design, particularly in the home. This relationship between technology and participant is where research laboratories such as the architecture machine group, discussed strategies to study the realm of ubiquitous computing even before it came to be. Co-founded by Nicholas Negroponte and Leon Groisser, the group was active between 1965- 1967 before changing to the more commonly known MIT Media lab with the help of Jerome Wiesner, they looked to explore and develop strategies for artificial intelligence. The infamous quote by Negroponte himself that suggests that an evolution of computing is upon us as ‘Computing is not about computing anymore, it’s about living’⁹.

9 BrainyMedia Inc. (2020) Nicholas Negroponte Quotes.

This sort of thinking paved the way for a computer scientist like Mark Weiser, to coin the term ubiquitous computing himself in 1988¹⁰ Ubiquitous computing is the collation of information collected from sensors and biometric monitors that when paired with an everyday (often mundane object) it produces a more personalized experience. MIT Placelab¹¹ is an example of this. This live in laboratory was created with over 200 different sensors to collect data of ten-day intervals on participants to gather data to improve ubiquitous computing in the home. In effect this collation of data that can respond to the command of a user embodied Kiesler’s ideas in ‘The Space House’ and was supported by Matta who said a home in this sense, could “push forcefully [its] inhabitant into the centre of the ultimate theatre where he becomes everything..”¹² This leads me on to thinking about the ability to create a seamless space for multiple participants inhabiting the same area. The design premise behind that of Kiesler’s ‘Space house’ tried to show that, through its moving walls that expand and contract in line with a user, allowing a home to open up to guests when needed and contract again when only being used by one inhabitant.

10 As cited by Markoff, J. (1999). Mark Weiser, a Leading Computer Visionary, Dies at 46. The New York Times.

11 MIT and TIAX Research initiative

12 (Matta, E. 1938 pg. 43) cited by Fijalkowski, K 2004.

Arguably though, Weiser believed that the oversimplifying of tools in a digital interface could interfere with how they are used. "Seamlessness could mean sacrificing the richness of each tool in order to obtain bland compatibility"¹³ and when applying this to seamlessness within space, this too would support the stance that a 'seam' is needed to promote an honesty between task and result, not just a result from a task- something that automation can't do alone. To put it simply, if a person walks into a room in which its lights are controlled by a motion sensor, the sensor assumes the person requires light to navigate the room and removes the person's ability to decide if the lights need to be on, a factor that could have been controlled by a light switch alone. Of course, in this overly simplified example, the motion sensor benefits the energy output of the building rather than the user, but it begins to show how quantifiable data can be converted to benefit a particular aspect. Even Kiesler himself believed, "aligning architecture with bodies-in motion would guarantee a harmonious and balanced interaction between humanity and its technological environment"¹⁴.

13 Chalmers, M. and MacColl, I. (2003) Seamful and seamless design in ubiquitous computing.

14 *ibid*

For Kiesler's theories fell in line with his studies between user and the ease of using a bookcase, not reflective of the technology we know now or will know as we constantly move in time towards a given future. Even if Kiesler's mere existence preceded this technological automation, he "anticipated that architecture designed to dissolve subject-object relations between bodies and their surroundings on a molar and molecular level would re-energize habitants and ease daily tensions and stress"¹⁵ and this after all is what ubiquitous computing seeks to do.

15 *W ibid*

GLITCH -
The Seam
in between



A glitch is a sudden, usually temporary malfunction or fault of equipment.¹⁶ Often it produces fear evoking qualities as it highlights a flaw in a software, that in the case of a perfect operating system, something has infiltrated it causing it to bug out, to glitch. Perhaps its sheer presence serves as a reminder that in time, everything is partial to its own obsolesce. In this segment, I will explore the glitch and how overlaying the virtual within the physical can be seen as the 'seam' and in that thinking, how can this space that is created, be inhabited seamlessly. The Venn Room(- see fig 5,6) does well to depict this as the space where two virtual environments collide and that it comes with

Figure 5(above): The Venn Room visual depiction
 Figure 6 (right): Digital image demonstrating the glitch, the overlay

¹⁶ 'Glitch'. The Oxford Pocket Dictionary of Current English(2020)



"Strange misalignments and glitches fundamentally changing our domestic rituals, our sense of privacy and our social norms"¹⁷

This collision of worlds provides a back and forth between the user and space and whilst although, their physical body can reside in reality, their attention can be drawn elsewhere, in some cases removing them from the reality they reside in. I will focus on The Venn Room, a project by Space Popular and through considering both the meta-physical terms of space and time also known as the space of flows. I will also discuss Jak Wilmot, a gamer who spent 168hours in Virtual reality, further to this I will try to determine how different applications of technology differ in ability to seam or even merge the overlay of space onto reality. Perhaps a seamless space may not be able to exist as it is this overlapping that connects these two.

However, before jumping to that conclusion, I want to explore the possibility of overlap being so well combined it could be conceived as seamless. Adam Greenfield, author of *Radical Technologies: The design of everyday life*, suggested when discussing the addition of technology in human life that "so far, at least, only one mode of spatial experience can be privileged at a given time. And if it's impossible to participate fully in both of these realms at once, one of them must lose out"¹⁸. This is convincing at least when discussing the 'window' as it is often that, that is a limitation for augmented reality- virtual realities more commonly received 'smart' tech. For many instances of augmented reality, are received through small windows e.g. Phone or computer screens. This limited view of information allows the user, only a snapshot of an environment altering experience, supporting the stance that AR may not be the suitable solution for a seamless application. But when the window expands to an immersive experience with it causes even more to collide and an exhibition by Space Popular 'The Venn Room' takes this one step further depicting a future where virtual reality is used as a tool that brings us closer together.

18 Greenfield, A. 2018 'Radical Technologies: The Design of Everyday Life'. Verso. pg. 56

For the most part of the 20th century telephones have afforded us the luxury of connecting with each other despite residing in different, often faraway places. Then came the Internet followed soon after by the likes of smart phones that allowed us to gain real-time visual along with sound, allowing us to feel closer to one another. Space Popular dictates that “in an augmented future, a virtual visitor will bring their surroundings along with them, your home and theirs will overlap... and together you will rearrange the furniture to you get to sit together on the couch and cook dinner together”¹⁹. Now, not only can auditory and visual cues provide individuals to feel as if they were in the same room, a room has been created for them (see figure 7). This overlapping of information is depicted as a glitch. Being able to rearrange the furniture brings a physical representation on how space is inhabited. Aligning tangible objects in one’s home, that are simultaneously represented in a virtual environment both allows a user individual seamlessness however, when combined with another’s, create a glitch when they overlay. Perhaps this is a layer of information that is yet to be fine-tuned over time or as Silvana Levy says in his article titled Surrealist interference of space, that “Space after all, is defined through the architecture that constrains it, as well as the architecture that is contained within it.”²⁰and should exist in its own right.

19 Deezen. (2020). Swapping video calls for VR will change our homes forever says Space Popular.

20 Levy, S 2004. ‘Menace, Surrealist interference of space’, Mical, T. Surrealism and Architecture. Routledge.pg 60-78



Figure 7: Visual depiction of The Venn Room Overlap

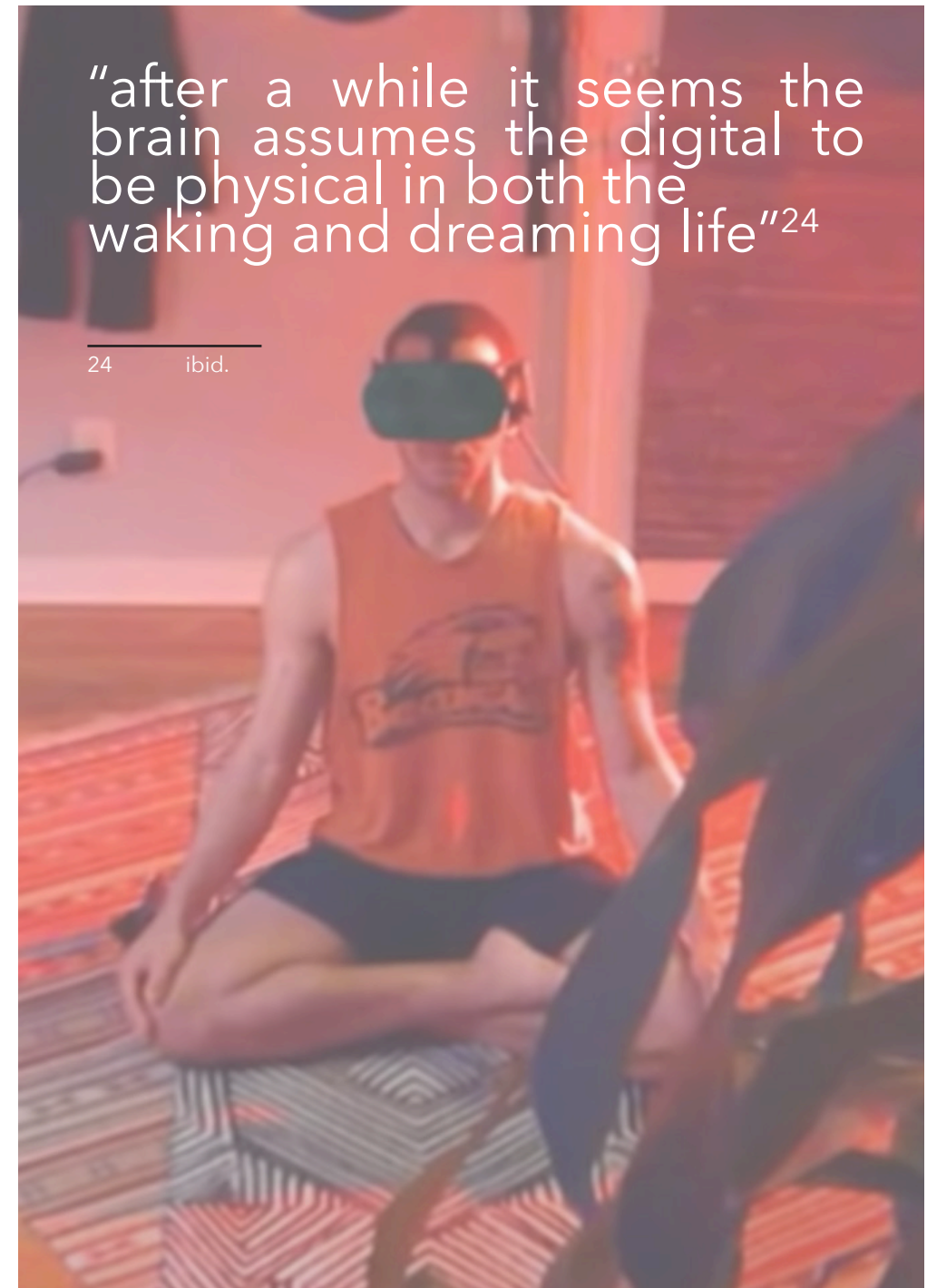
Challenging aspects of the glitch that causes the seam between worlds, I looked at Jak Wilmot's case. Exploring the effect time has on an immersive experience of VR, I want to establish the relationship between time and glitch and its resonance when considering a seamless space between virtual reality against the real world. Wilmot used two different types of headsets one with PT²¹ capabilities, this offered a low-quality view of his actual surroundings²² (His home in this instance) and still has VR overlayed to make navigating his reality easier. He also used an Oculus Go headset, for a complete immersive experience. He would eat, work and sleep in a headset. Over the week he attempted his normal routine with a digital overlay. It took some time to adjust but once he did, he said "VR has this strange way of lifting you out of your body and placing you into the body of another"²³. This disassociation from his body allowed him to become whomever he wanted to be. With the wide range of virtual worlds and rooms available Wilmot was able to meet his socialization targets by connecting with others doing the same. He practiced yoga with a backdrop of a savannah(see fig 8), was able to meet up with virtual friends in a forest. Being transported from one place to another across the world in the matter of minutes could be taken as disorientating but

Figure 8 : Jak Wilmot doing yoga with headset on

21 Pass through

22 Disrupt. (2019). I spent a week in a VR headset, here's what happened.

23 TEDx talks. (2019). What I Learned from Spending a Week in Virtual Reality



There seems to be a metaphysical relationship between time and space when addressing the seam between physical and virtual worlds. It may be that time perhaps, removes the seam between real and virtual association. Whilst Wilmot states he had a “a positive disassociation from the body... an awareness of the body but not an attachment to it”²⁵ this higher level of consciousness is one that may before of only been afforded to those that practiced yoga or meditation but now can be achieved by total disorientation of the body through the challenging of the senses. The glitch can create an uncertainty as visual and auditory cues can trick the mind into a different perception of the space than the physical body resides in. When using the oculus, compared to the PT the window of connection to the physical world is removed (see Figures) and “now however there’s a paradigm shift, we can actually step inside these creations”²⁶. What Wilmot’s example lacks compared to that of the Venn Room is the ability to sync tangible objects that reside in reality with others through augmentation, that join in the space created. Going back to what Greenfield said, it may be that a world is not lost out on when there is no need for the sense of touch and in effect, it can appear seamless. However, in Wilmot’s case having to use two different headsets reinforces the idea that one of the worlds are in fact losing out and in turn, creating a seam.

25 *ibid*

26 *ibid*

What I conclude from these examples is a possible future of connectivity that could, in practice and over time soften the seam between the two in order to achieve seamless. But for now, it’s the glitch between them that acts as a reminder that they both exist in their own rights and although they are overlayed on one another or meet somewhere in between these spaces are important in their own right.

The Future - What if ?

“We are well aware that, in all likelihood, the future will look different from our “what-if” snapshots but designing into a projected situation can nonetheless guide us toward a possible and desirable future.”²⁷

Automation as a whole will in turn, change the way we inhabit space as well as with each other. “As these systems blanket our cities, every dimension of habitation can be transformed, from the simplest example, occupancy-sensing lights in a single room,”²⁸ like discussed in Smart before ‘Smart’, “to complex systems for sensing, modulating, and optimizing energy patterns across an entire city.”²⁹ Moving into a more technology driven sphere, there are many anxieties surrounding the alienating possibilism of futures that surround technology and our relationship with it.

27 Ratti, C and Claudel, M.(2015).The City of Tomorrow : Sensors, Networks, Hackers, and the Future of Urban Life

28 ibid

29 ibid

The ‘future’ is one that is dependent on its speaker and perhaps defined by the time when discussed. For modernists, it was an optimistic one, and their utopian portrayal of how the future was outlaid reflected that. Fast forward to 1996 Mark Weiser predicted that the within the next future “comes ubiquitous computing, or the age of calm technology, when technology recedes into the background of our lives.”³⁰ For the most part that could be true already. Humans have found ways to harness technologies to take the pressure off workload for, convenience alone. This has led to an increased production rate, turnover rate and has generally allowed humans more time to do the things they love. Alas, although this added integration notably has its positives, could it be doing more harm than good? With the ability to travel far and wide and be as close as a touch of button away, we sometimes may be complacent on how much of an impact technology has on our lives. Even more so today, living within a pandemic, technology has allowed us to feel closer together when we are advised to be more apart, an example of this is VR. As mentioned in ‘Glitch- The seam in between’, the Venn Room touches on how VR can be incorporated into modern day living to bring people the illusion of being closer together. The emergence of ‘smart’ tech means these simple additions now have become much more responsive, and it’s all down to the Internet of Things. The ‘smart’ in these devices equates to its ability to be able to quantify data and turn it into a personalized experience.

30 Weiser, M.(1996) as cited by Ratti, C and Claudel, M.(2015).The City of Tomorrow : Sensors, Networks, Hackers, and the Future of Urban Life

The invisible network of virtual internet- connected objects have the ability to share this data without the need for human control. This layer of information is known as the Internet of Things. The level of personalization would suggest that a smart home is a viable option for a seamless space. In theory it could function as Kiesler once hypothesized in his project "The Space House", it could "transform to changes in the human dwelling keyed to the evolving necessities of the inhabitant"³¹. This is without considering the growing possibilities of outcome for technology, with privacy concerns being a reoccurring theme throughout most dystopian portrayals of smart tech in the media, namely TV/Film. In this segment I shall address the futures of moving towards technological seamless living, and how they can be implemented touching on examples used throughout this writing.



31 ibid

Uncertain Futures

It's easy to assume the addition of technology can benefit us in more ways than one however, in many examples of a dystopian portrayal of future technologies integrated within the home suggest a sinister outcome. Black Mirror does just that. In an episode³², written by series creator Charlie Brooker, it shows aspects of future tech that could emerge, I will compare these to the similarities between technology that has just joined the market, or is close to fruition now. The episode revolves around three different storylines that are somehow connected by technology. The first of them is portrays a smart home device used to ease the stresses of a busy working woman. It depicts said woman receiving a surgery that is able to take a digital copy of her subconscious and it is then inserted into a device called a 'cookie'(see figure 9). The cookie acts as a bridge between her home and smart devices and using the copied consciousness, is then able to predict all her needs within the home. Unbeknownst to the digital copy-who is shown being trained by the installer, cannot quite understand why all its purpose is that to serve its original self, suggesting that these 'smart' objects in this portrayal have human qualities such as thoughts and feelings (see 10).

Figure 9: still from episode of Black Mirror 'White Christmas' showing 'cookie'

32 Of Black Mirror, White Christmas (2014)



Similarities can be drawn between the cookie and devices such as Google Home, that offers personal assistant like services, and even Ray Kurzweil³³ discussed at "Global Future 2045 International Congress...that by 2045 humans would have achieved digital immortality by uploading their minds to computers"³⁴. I wouldn't put it past huge tech companies offering ideal automation strategies with such responsive qualities within the home, to not be feeding their own personal agendas in regard to technological advancement.

33 Google's head of engineering

34 Didymus, J.(2013). Google's Ray Kurzweil: 'Mind upload' digital immortality by 2045.

This indeed touches on the fear of Artificial Intelligence being able to think for itself, a trait that is so far, only afforded to humans and living beings alike. The other example within the episode is the ability to block people from your physical view through a blurring of the figure that acts in real time to real life (see figure 11) This overlay is depicted through an ocular implant that works seamlessly with a remote that controls the functions of the eyes whilst also distorting the noise from blocked person. The seaming of social media qualities of blocking someone you wish to avoid, and having it transferred is a fear provoking one. The episode somehow offers optimisms, but too deepens fear by insinuating this technology could work hand in hand with the law, and offenders in passing could be blocked and highlighted by this technology. The technology itself, has been attempted in sorts by Google who produced a working prototype for Google Glass, a wearable pair of AR lens which can overlay information whilst allowing vision through.



Figure 10(left): Digital copy operating smart house

Figure 11: still from episode of Black Mirror 'White Christmas'

This could be compared to Jak Wilmot's experience of spending 168 hours in VR with his passthrough headset as he believes that in the future "virtual and augmented reality will be one in the same, you will have a pair of compact glasses"³⁵ that what he attempts to show in his experiment is "simulate what the future of VR/AR will be".

35 Disrupt. Wilmot, J. (2019). I spent a week in a VR headset, here's what happened.

The Global home

Seam fullness, when discussing the possibility of integrating technology within the home of the future could in fact illicit a sense of global unity

"As we are able to cohabitate virtual worlds from the comfort of our own homes, the relationship between the physical environments at each end of the shared visual realm forms a triptych"³⁶

Taken from Space Poplar's article who owns the global home? Poses questions to the reader about how the emergence of new technology will reshape our rituals of how we connect with our surroundings and others. It does also evoke a level of uncertainty in me about the ownership of the future home. A home can be seen as one that offers security as you normally have some degree over ownership over it, be it if not in a deed sense, but the things within that make it your own. In the Venn Room, this overlap is shared with one another, creating a space that

36 Lesmes, L. and Hellberg, F. 2019. 'Who owns the global home?', Reisner, Y. Tallinn Architecture Biennale TAB19 Beauty Matters. Estonian Museum of Architecture

although residing in your own physical sense of home, you now have a global one in the same space, that shared with others. This fear of ownership can be also be thought of when considering the hands that certain technological advancements fall into. As I touched on earlier with the likes of Google Home, our sense of privacy is challenged, 'smart' devices have the ability to collect our data but is marketed as something we need or want, and the desire for convenience often mean that people overlook the devices ability to lie dormant silently collecting data on our daily habits and communications. Arguably, privacy is only important if privacy within the home is valued so. If the integration of technology promoting a shifting sense of what we deem private, perhaps the collection of data we find medial is just that just data. However, as already seen in real time instances, Cambridge Analytica, proves as an example of how data can be used to maliciously to persuade and control.

Of course, as with any portrayal or prediction of the futures of technology, it will differ to actual real life standing. As we develop, so does our understanding of how technology should evolve too. If we are able to harness technology for the benefit of all but still have it exist in a manageable sense to seamlessly exist in our everyday lives, then I believe that we are in for a viable future.

To What
End...

Seamlessness in this current timeline may be premature in its entirety, alas we'll never truly know what the future holds as it is one we will never inhabit. As highlighted throughout this piece, time and our idea of the future depend solely on its speaker. To conclude this writing, I pose questions to you, the reader, to explore this thinking of seamlessness further. As technology recedes into the background of our lives, the home of the future could cater to our every need like Kiesler's belief, and not in a dystopian way TV has theorized. 'Smart' as discussed, is only going to get smarter. As you move through your own timeline in an integrated world, will you notice the overlap that appears and disappears around you? So, if it hasn't already, will the premise of convenience persuade you to relinquish chore to automation? And to what end?. Perhaps the seams, like glitches, are there for a good reason and serve as a definition between. However, if there were ever to be a truly seamless space, are you prepared to sacrifice your privacy for one?

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