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THE HYPERREAL: A NEW NORMAL FOR TEACHING POST-COVID. TRANSFORMATION OF REMOTE TEACHING EXPLAINED THROUGH BAUDRILLARD'S FOUR STAGES OF SIMULATION

A B S T R A C T

The pandemic's redefinition of spatial interface brought with it the need to reconsider our territories of occupation and to study both the 2d and 3d as our built and unbuilt environment. The distinctions between physical, digital, actual, and virtual have evolved and blurred, and we must prepare our students for the new dimensions which we all occupy and engage. Through alternate methods of exploration, investigation, and documentation, we as architects and educators must reconceptualise what constitutes the territory of architecture and use the changes the pandemic has forced upon us to expand our understanding of the architectural landscape and site.

Through a comparison with Baudrillard's theory of simulation from his book "Simulacra and Simulation", this paper describes the evolutionary phases of design instruction over the course of the pandemic. It describes the teaching techniques utilised to help students comprehend the concept of space, landscape, and territory in a time when the events of the world simultaneously constrained us to our domestic habitations and extended our international reach through data and internet connectivity. The foreground, background and focus of the video conference call is playfully examined; the process of remote site analysis is assessed, and the expansion of architecture into the virtual realm is explored. The transformative existing and speculative impact of hybrid-reality architecture is revealed and discussed.

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KEY WORDS

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DESIGN PEDAGOGY,
CRITICAL THEORY,
CRITICAL CARTOGRAPHY

> ‘If you dislike change, you’re going to dislike irrelevance even more.’
>
> General Eric Shinseki, 2001

INTRODUCTION

Necessitated by the onset of the pandemic, the desire to replicate traditional in-person design education using online tools resulted in an inadequate simulation. The Inside Higher Ed and College Pulse survey from spring 2020,[1] on student voices across campus and in the classroom - plus ideas for action, found that:

- Nearly half of students (47 percent) would rate the value of their education this year as fair or poor;
- More than half (52 percent) say they learned less this year compared to pre-COVID years;
- About one-quarter (23 percent) of freshmen report having felt very unprepared for college; an additional 35 percent felt somewhat unprepared;
- Regarding cheating, 47 percent say it is at least somewhat common in online courses;
- Only about one in five students recalls receiving nudging reminders from their college about both course activity and college business deadlines.

Why? Because one cannot simply impose a system designed for a specific context onto a fundamentally different material and immaterial environment. The method and systems of teaching must be re-invented to allow for a new paradigm of teaching.

Architectural institutions, scrambling to provide a consistent pedagogical structure, largely missed the opportunity to see the pandemic as a moment in time to correct the fundamental injustice in education, e.g., diversity, accessibility, income equality, mobility, to name a few. These biases result from clinging to an ideology that is derived from a 18th century European concept of teaching - per Marx’s concept of historical materialism - the material conditions of a society determine the meaning of human existence.[2] In essence, Marx argued that every generation must define freedom for themselves. The concept of historical materialism applies to architecture as well. Each generation will have to define what architecture is for their generation. However, one must appreciate that this ‘definition’ is not fixed or certain and will have to exist in a state of radical

impermanence, allowing their definition to evolve. Our generation desperately needs a re-definition – the pandemic has clearly illustrated that we are at an epoch shift. As with the re-consideration of work which has led to the 'great resignation' – our generation desperately needs to reflect on how we teach architecture.

Further, the environment for which and within which we design are changing. The trending term 'metaverse' is used with both a promise and caution.[3] Regardless of its hype status, it is relatively undeniable that the pandemic acted as a catalyst in a move towards digital/virtual platforms for social interactions. This was true of almost all facets of life from business to recreation as offices were emptied, grocery delivery increased, and conferences moved online. For students (and their parents), the impact of switching to remote learning almost overnight was perhaps shocking, but the 'spaces' for online interaction had been available for a while. While most people may have never heard of Zoom pre-March 2020, certain industries had been using it for years, and likewise, more immersive AR/VR environments which acquired attention and maturity during the pandemic were under-utilised, but available tools as well.

Employing the four-stages of simulation, as defined by the French sociologist Jean Baudrillard in his book 'Simulacra and Simulation', this paper will describe the evolution of an approach to design education which embraced the digital and virtual. It will identify its shortcomings, previous and remaining obstacles as well as positive outcomes of the shift from in-person learning to alternative teaching formats. It will illustrate an attempt to find new tools for design education that respond to the need for new modes of interaction, which respond to both the digital and virtual landscape of our current environment, and the need to address the inherent infrastructural deficiencies of an inherited but outdated pedagogy.

1. BAUDRILLARD AND THE FOUR STAGES OF SIMULATION

Jean Baudrillard (1929-2007) was a philosopher, sociologist, cultural critic, and theorist of postmodernity who challenged all existing theories of contemporary society with humour and precision. An outsider in the French intellectual establishment, he was internationally renowned as a 21st century visionary, reporter, and provocateur. His Simulations (1983) instantly became a cult classic, and made him a controversial voice in the world of politics and art.

In the world of Baudrillard, social relations have begun to disappear between humans because humans have begun to disappear. In fact, Baudrillard thinks that reality itself is in the process of disappearing; what has been learned and understood under the name of 'the real'. Baudrillard argued that postmodern is a blurring of the lines between humans and machines, a blurring of the line between reality and image. It is a grouping of the world in which reality is simply that which can be simulated, xeroxed, and copied.[4]

The postmodern trajectory leaves us in a situation were drawing the line between the real and the unreal is no longer merely philosophical but a practical day-to-day issue. Instead, all we have is the Hyperreal, when the simulation transcends the very thing, it was a copy of; it has become more real than the 'real' - the simulation becomes the new real.

2. SIMULACRUM

Is never that which conceals the truth - it is the truth which conceals that there is none.[5] The simulacrum is true.

2.1. First Stage

Faithful image/copy, where we believe, and it may even be correct, that a sign is a 'reflection of a profound reality.'[6] This is a good appearance in what Baudrillard called 'the sacramental order'.

2.2. Second Stage

A perversion of reality, this is where we come to believe the sign to be an unfaithful copy, which 'masks and denatures' reality as an 'evil appearance - it is of the order of maleficence.'[7] Here signs and images do not faithfully reveal reality to us, but can hint at the existence of an obscure reality which the sign itself is incapable of encapsulating.

2.3. Third Stage

Masks the absence of a profound reality, where the sign pretends to be a faithful copy, but it is a copy with no original. Signs and images claim to represent something real, but no representation is taking place and arbitrary images are merely suggested as things which they have no relationship to. Baudrillard

calls this the 'order of sorcery,'[8] a regime of semantic algebra where all human meaning is conjured artificially to appear as a reference to the (increasingly) hermetic truth.

2.4. Fourth Stage

Pure simulation, NO relationship to any reality whatsoever. Signs merely reflect other signs, and any claim to reality on the part of images or signs is only of the order of other such claims. This is a regime of total equivalency, where cultural products need no longer even pretend to be real in a naive sense because the experiences of consumers' lives are so predominantly artificial that even claims to reality are expected to be phrased in artificial, 'hyperreal' terms. Any naive pretension to reality as such is perceived as bereft of critical self-awareness, and thus as over sentimental. Hyperreality is more real than real.

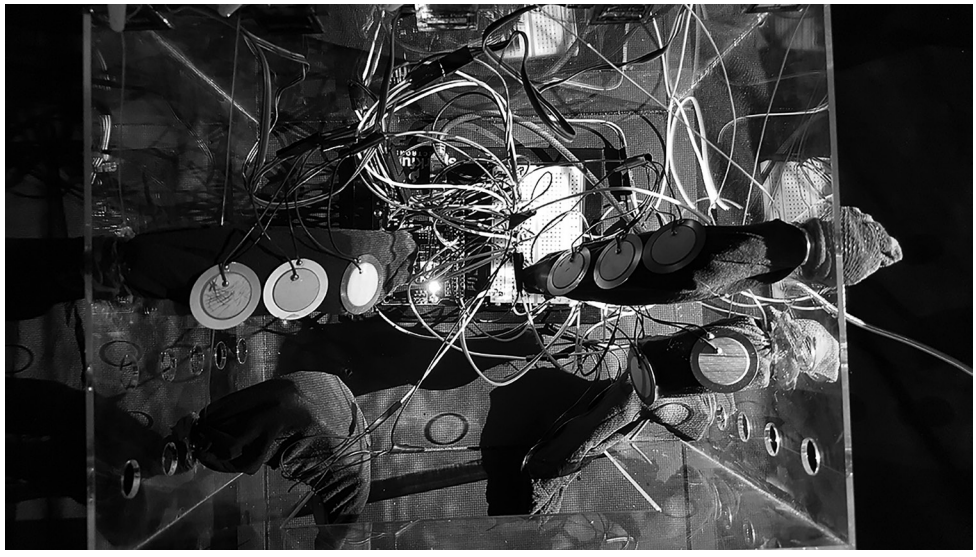
3. THE FOUR STAGES OF SIMULATION THROUGH TEACHING DURING COVID

Architectural education has become seduced by serving global capital, and as such, the education has been solely focused on producing staff via 'professional' course requirements for accreditation, revising curriculum to chase dubious rankings, and a post-graduation intern 'development' programme to serve private interest. Perhaps the profound changes required to teach during Covid can provide a way out of a system that has failed both our built environment and students – historically, chaos is the catalyst for invention and progress – the resulting chaos brought on by the pandemic has prompted teachers to not just question how we teach, but most importantly what we teach. Teachers must use this unfortunate crisis as a moment for radical change and an escape from a system that has nearly rendered both the academy and the practice of architecture obsolete. Perhaps the first terrain we must interrogate is the classroom itself. This paper will illustrate how the authors' employed Baudrillard's four stages of simulation in an attempt to develop teaching techniques during the pandemic. It is also an opportunity to address the systemic failures within the current structures of teaching to develop a pedagogy that blurs the lines between the real and unreal, physical versus virtual, and address the inherent biases in an educational system that was defined over two centuries ago. In essence, this paper will illustrate an attempt to define a new reality – a hyperreality – for teaching after Covid.

3.1. First Stage - Reflection of a Profound Reality

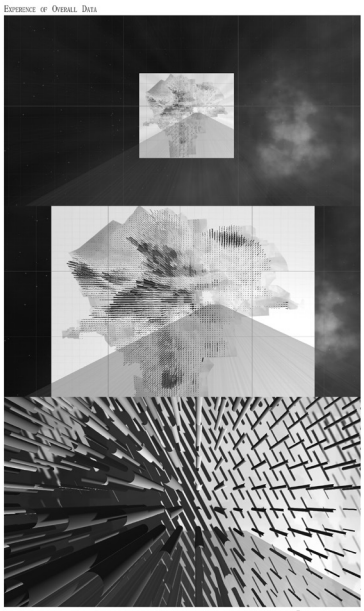
Over the course of almost a decade, the media courses under the authors' prevue have evolved to reflect changes in the professional and academic application of digital design and visualisation tools. In 2014, graphics-based scripting and animated modelling tools were the advanced digital design tool standard. That year students were challenged to apply these skills in a full-scale constructed installation using digital fabrication techniques, animation, and projection mapping (Figure 1). Each year's course was adapted to build on the year before and introduced new content - including programming and scripting to make interactive digital and physical models using microprocessors, smart phones, augmented reality (AR) applications, and immersive virtual reality (VR) environments (Figure 2). In 2017, this culminated in another installation, a formally complex, student-constructed, sensor-driven interactive physical environment with a parallel virtual environment accessed through a VR headset (Figure 3). In 2018 and 2019, the class integrated geographic information systems (GIS) with visual programming, and animation into immersive VR environments (Figure 4).

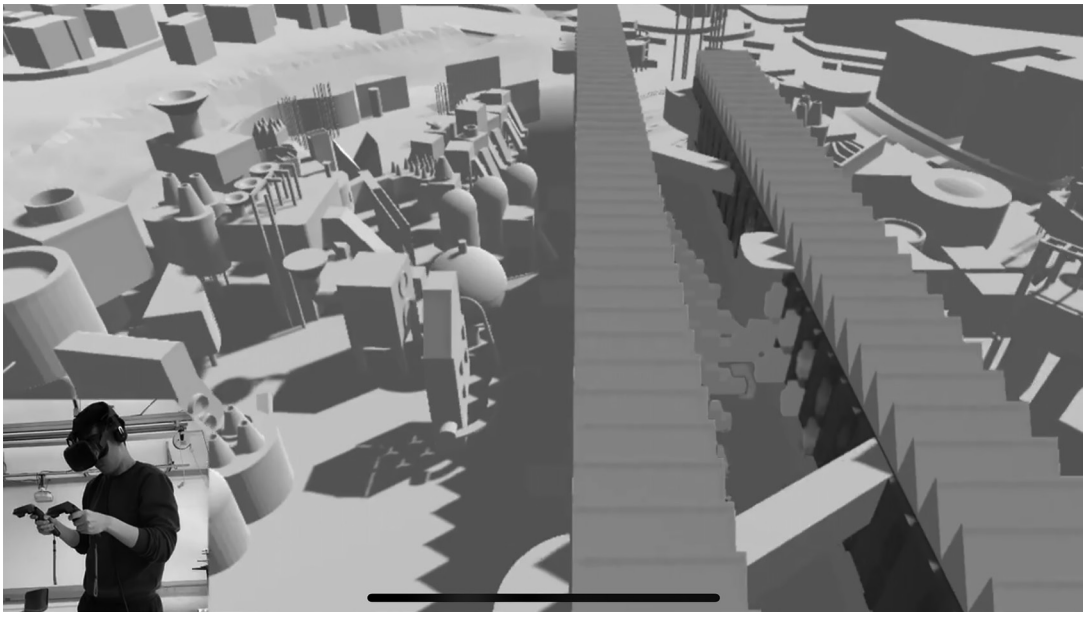
With each year, the course evolved to reflect the changing environment within with and for which we design. Initially, the tools themselves were digital, and projection mapping was the most accessible method for enabling occupation of a digital creation. But as virtual environment tools, including AR/VR headsets, became more commercially available, the design products also shifted. Increasingly, digital documentation of physical territories recorded as data (as with GIS or environmental simulation software) was utilised to design information augmented digital versions of those locations that could only be occupied in virtual reality (Figure 5). These digital simulations are indicative of the invisible immersive infrastructures – hybrid realities – which were emerging and expanding the design palette, and the realm of architecture even before the pandemic. These initial designs for hybrid reality were intended as faithful images, digital copies of physical environments, augmented with information to support design communication.



UP: Fig. 1. Physical fabrication and projection mapping techniques were used to construct an occupiable digital façade in 2014.

DOWN: Fig. 2. Students experimented with programming, micro-processors, and kinetic physical models to create interactive architecture.





UP LEFT: Fig. 4. Spatialised visualisation of GIS data.

UP RIGHT: Fig. 3. An iteration of the physical installation, this time implementing sensor-driven kinetic components and a parallel Virtual Reality environment.

DOWN: Fig. 5. Student utilises a VR headset to spatialise visualisation data within a simulated city.

3.2. Second Stage – Perversion of Reality

The transition to an exclusively online format for design education, particularly when it's an approximated interpretation of the expected, resulted in predictable shortcomings in the delivery, short attention spans, and limitations in the capacity for demonstration of the intended learning objectives. Design studios, particularly 'integrated design studios', holistically approach design from concept through to structure, and into detailing. They require the dissemination of professional experience and knowledge and have historically utilised hand sketching, physical model building, and construction fieldtrips as instructional tools. In the fall of 2020, 'hybrid teaching' was the technical offering, but online teaching remained predominant, and a methodology of teaching was established which approximated the in-person studio experience using digital tools like Miro, Conceptboard, Sketchfab, and Modelo as pin-up boards (Figure 6), coupled with the common social interaction softwares like Zoom or Teams.

These tools offered some advantages which should continue to be implemented in post-Covid instruction. Unlike the lost sketches on trace paper or damaged models, the digital pin-ups created archives of student work, and faculty feedback, which could be easily accessed and used to trace the trajectory of the design. External guest critics from all over the world were able to offer advice and insights to students, without travel demands. This broadened the reach of a typical studio budget and allowed for the integration of more expert guests throughout the semester. And new XR techniques were tested that enabled students to create and share interactive building tours and 360-degree digital models remotely.

Unsurprisingly, there were drawbacks to these tools as well, some of which were apparent before the pandemic. Digital modelling tools reliance on panning and zooming made scale and gravity less tangible than the physical models. Material studies were limited to internet searches rather than hands-on demonstrations offering kinaesthetic learning. 'Zoom fatigue' limited student attention spans and engagement, and taxed instructors' capacities as well. Economically or location restricted access to technology and Wi-Fi became an even greater impediment for students, and social distancing inhibited the informal learning opportunities and emotional support previously nurtured through studio culture.

Ultimately, this stage of pandemic teaching was a perversion of the known. While significant effort was made by all, the approximation of 'the real' was always evident. These imitation disconnected students and amplified how

access to resources (or lack thereof) is a factor in architectural education. The juxtaposition acknowledges that a breadth of expertise from all over the world was brought into the classroom via Zoom lectures and new tools for exploration, communication, and dissemination of design were developed and retained.

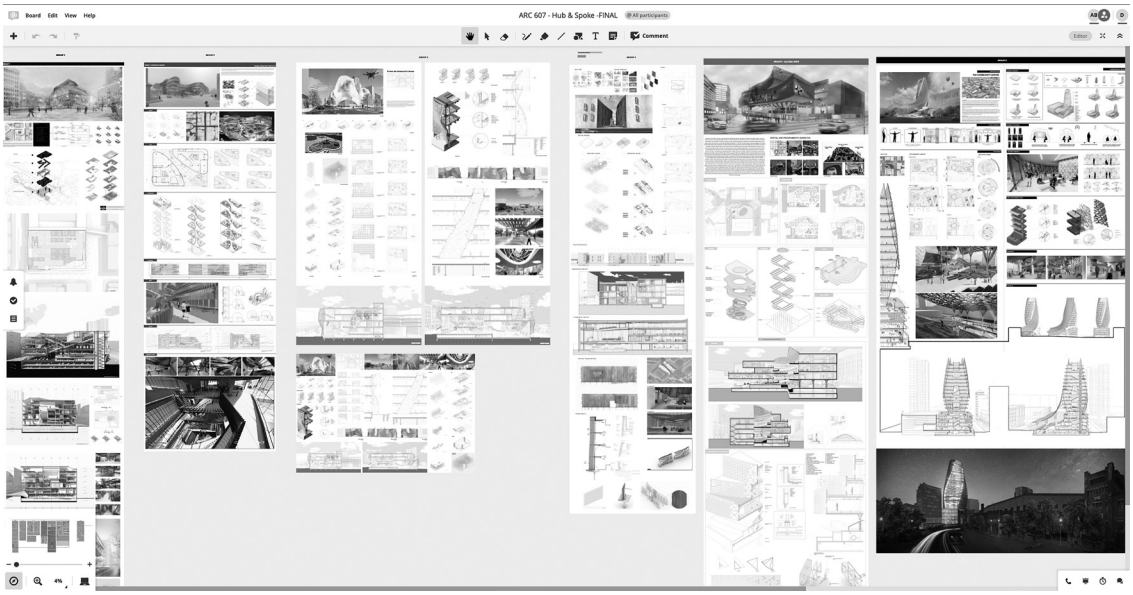


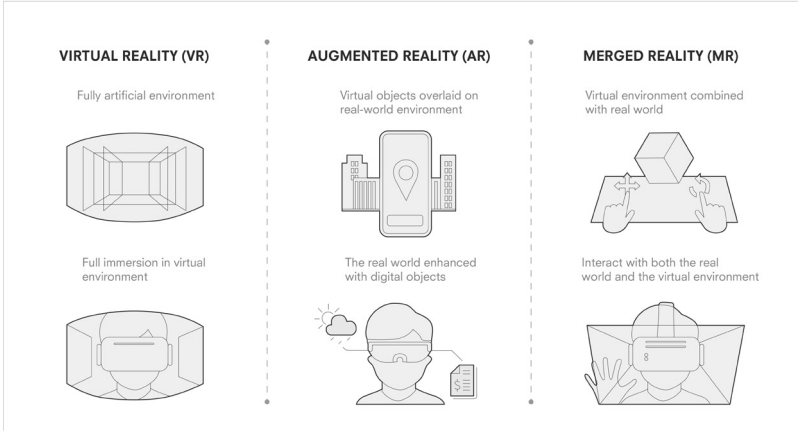
Fig. 6. Digital studio pin-up using Conceptboard platform for communication.

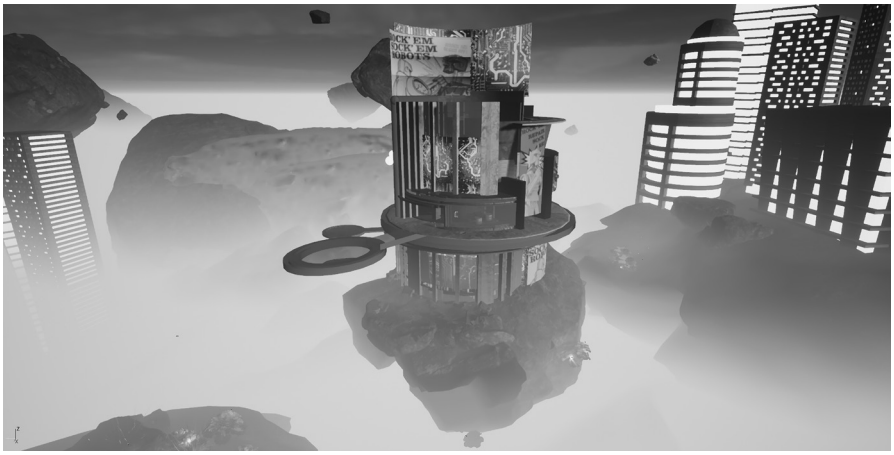
3.3. Third Stage - A Copy with No Original

In the fall of 2019, a short intensive two-week summer course delving into the realm of 'XR,' including AR, VR, and MR (Figure 7), was planned for May of 2020. This course was intended as an introduction to the content of the more involved media courses described previously. A multitude of equipment and lab time had been coordinated in preparation for this course, which had to be radically re-considered with the onset of the pandemic. The content was delivered remotely without access to the intended professional equipment by adapting to open-source software and

mobile devices. Coupled with the amplified presence of XR in our culture, the increased availability of course content that engages these mediums has propelled the capacity of students to use and question their architectural value through studios and independent projects (Figure 8). Students were able to use online and mobile devices to develop a range of shareable content implementing XR principles through the web and as customised mobile applications to create immersive, interactive environments. Although this course had no actual precedent and was novel out of necessity, it unveiled a host of resources available for implementing XR as a design and a communication tool without expensive equipment. These tools were then utilised in subsequent studios to help convey design ideas, 3-dimensionally and interactively, even in remote-learning settings (Figure 9).

This evolution of an XR-informed design course into a 'faithful copy' of the original intent struggled with accomplishing learning objectives across multiple software platforms and devices, with shifting updates, and no opportunity for easy hands-on assistance. But it opened a new level of accessibility to a previously exclusive realm – one which required labs filled with powerful processers and expensive equipment. Pushed to do so, conventional XR visualisation tools were substituted with open-source software and ubiquitous personal devise. These new mechanisms could not entirely replicate the virtual realm of an AR or VR headset, but they certainly pointed out how digital & virtual realms, even when accessed via tiny hand-held screens, are increasingly sites for architectural occupation and immersive interaction.





UP: Fig. 7. The components of XR, including VR, AR, & MR.

CENTRE: Fig. 8. Virtual environment constructed for occupation exclusively via the internet using a VR headset and keyboard movement.

DOWN: Fig. 9. Students created a video game to enable virtual tours of their studio designs.

3.4. Fourth Stage - Hyperreality

In the spring of 2021, the authors' instructional focus while teaching a landscape studio shifted to include a larger scale of contextual information as a design parameter. The still hybrid delivery of instruction made the imperative to analyse sites remotely unavoidable. Analysis and documentation of selected sites was supported by familiarity, with GIS data collection and other online mapping resources. As the setup for a yearly memorial competition, the theme 'Foregrounding Backgrounds: The Landscapes of Remote Interaction' was inspired by the concept of Immersive Infrastructures and the realisation that the space of the Zoom call has physical, virtual, and digital landscapes embedded in it. Students were instructed to create Zoom backgrounds, which engaged all three factors and considered the temporal component of the medium as well. The resulting work was diverse reflection into the students' widely varied interests and situational settings (Figures 10 & 11). Many were a kind of multi-dimensional 'selfie', with representations of themselves engaged in alternate activities in multiple locations of their screen. Others took a more picturesque approach to this digital landscape and created 'windows' which framed themselves within an extended view beyond. Some highlighted the spatial constructs of their alternate non-studio locations while some implemented the virtual background as a way of reinforcing the school setting, they were missing. In all cases, the assignment was a recognition that this learning environment had become a new space of occupation (Figure 12). The realm of the online class had surpassed its simulation status and become its own reality.

UP: Fig. 10. A multi-layered allegorical image that compiles the foreground, object, and background of the Zoom landscape.

DOWN: Fig. 11. Simulated environments for occupation of the simulated classroom.

Fig. 12. The new hyperreal classroom allows for universal engagement by students and faculty asynchronously and in real-time.

CONCLUSION

The desire for a radical break from an educational structure that was defined over two centuries ago is rooted in Baudrillard's critique of modernity. The postmodern is a distortion of the distinction between humans and machines, a blurring of the line between reality and image. Baudrillard argues that this process, from modern to postmodern, in which capitalism reached a certain level of accumulation, commodities began to detach themselves and become images, and citizens who formerly played roles as political actors, began to detach themselves from their own lives and become spectators, has changed us fundamentally, and helped to bring our relations as humans to a close.[9] For Baudrillard, the apocalypse has already occurred.

It wasn't religious, it was not atomic bombs, it was shopping. At some point in the development of technology human beings ceased to be the reason of things, and things took on their own reasons. However, Baudrillard believed that this is a good thing. After all, modernity was also responsible for some of the greatest atrocities of mankind: the Holocaust, nuclear bombs, climate crisis, slavery, genocide, etc. For Baudrillard, the opportunity to escape a world in which such horrific acts can be justified through 'rational' argument, 'objective' data, and scientific reason – is one we should all welcome. And perhaps, this is how we should also position ourselves teaching after Covid. Our previous normal was one that benefited the wealthy, physically privileged, white western European, and English speaking. As Baudrillard laid out in his book Fatal Strategies a plan for us all to survive in the

Post-Modern, teachers must also see this moment as requiring a new paradigm to not simply survive but develop techniques that can address the prejudice and inherent bias the previous system refused to even recognise.

Ironically, among the authors' pre-Covid research and teaching goals was the pursuit to expand the opportunity for hybrid reality integration in the classroom and aim to design and test a virtual classroom for studio instruction that allows remote teacher-student interaction. Of course, that opportunity presented itself to almost everyone in the past year, and the benefits and challenges it revealed have heightened the demand for more accessible tools to facilitate 3D interaction, social engagement, and instruction.

One promising possibility of the increased use of XR and digital tools for remote teaching is the increased accessibility to design education for non-traditional students and students with disabilities. Using the spatial and immersive capacity of these tools can better enable remote teacher-student interaction, and accommodate student disabilities and scheduling challenges. But hybrid teaching requires access to the necessary technological equipment and infrastructure. While there is a great potential to implement new tools, there is also a reliance on accessibility to the necessary devices and internet which allow these benefits. Inequitable access to technology has created an obstacle for effective architectural education, especially as digital and virtual realms become site, landscape, and material for architectural intervention.

NOTES

1 Mellisa Eznak, *How Covid-19 Damaged Student Success*, https://www.insidehighered.com/news/2021/06/21/what-worked-and-what-didnt-college-students-learning-through-covid-19, 21 June, 2021.

2 Karl Mark, *A Contribution To The Critique Of Political Economy: The Mode Of Production Of Material* (Moscow: Progress Publishers, 1859).

3 Ethan Zukcerman, *Hey, Facebook, I Made a Metaverse 27 Years Ago*, https://www.theatlantic.com/technology/archive/2021/10/facebook-metaverse-was-always-terrible/620546/, 29 October, 2021.

4 Jean Baudrillard, *Fatal Strategies* (Los Angeles: Semiotext(e), 1983).

5 Jean Baudrillard, Simulations & Simulacra (Los Angeles: Semiotext(e), 1981).

6 Ibid.

7 Ibid.

8 Ibid.

9 Guy Debord, *The Society of the Spectacle* (Paris: Black & Red, 1967).

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