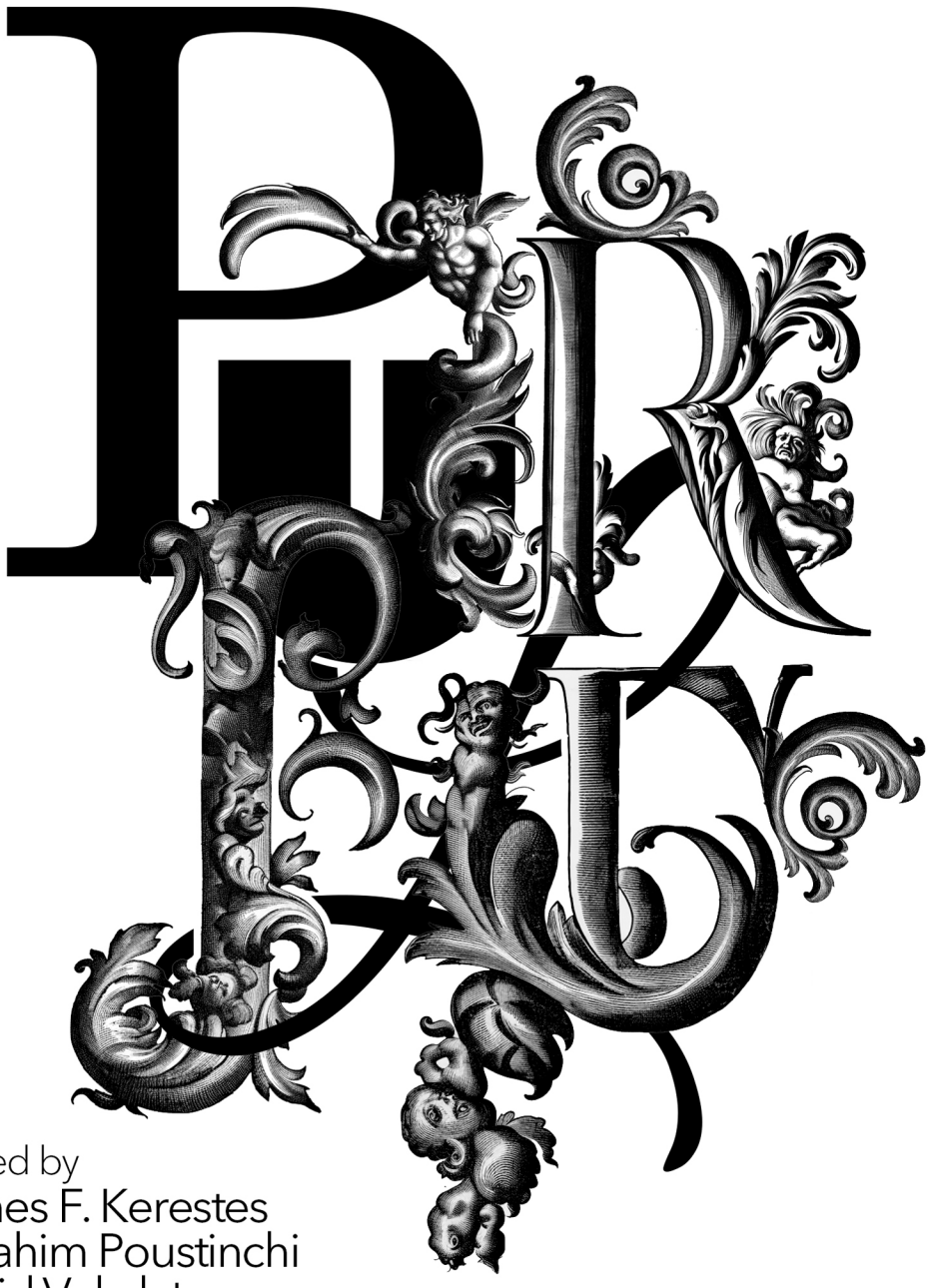
A Purple Architecture

Design in the Age of the Physical-Virtual Continuum



Edited by
James F. Kerestes
Ebrahim Poustinchi
Vahid Vahdat

Foreword by Graham Harman

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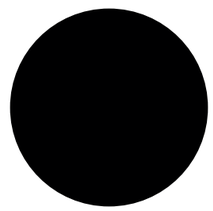

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A Purple Architecture

Design in the Age of the Physical-Virtual Continuum

Acknowledgments

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Pro logue

James F. Kerestes
Ebrahim Poustinchi
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> Just like the Industrial Revolution created prosthetic extensions that multiplied the strength of our natural bodies, the digital revolution is now creating prosthetic extensions that multiply the strength of our natural intelligence; but just like mechanical machines did not abide by—indeed, they often subverted—the organic logic of our bodies, digital machines now do not abide by—indeed, they often subvert—the organic logic of our minds.
>
> —Mario Carpo, *The Second Digital Turn*[1]

Mario Carpo's description of the "second digital turn" highlights the evolving relationship between the production of knowledge and technological innovations. Anticipating a post-second digital turn focused on the generation of atmospheres and their experiential qualities, this book re-approaches the (post)digital as a medium to revealing possibilities for contributing to the development and fostering of emerging, contemporary cultures.

The rapid development of technology and media, where digital and material realities seamlessly blend, provides clarity and opportunities for the future of digital life and spotlights commonplace, contemporary discourses which have become derelict and antiquated. Emerging from this technological revolution are design projects which no longer speculate on possible scenarios but rather aspire for a future rooted in storytelling and worldbuilding.

The centuries old topic of how to represent reality, and subsequently how to supplant it, anchors these scenarios. In the past few decades, philosophers like Jean Baudrillard, Gilles Deleuze, and Graham Harman, among many others, have all provided insight on experiencing the "real." The philosophical conundrum was catapulted into western popular culture through the 1999 film, *The Matrix*.[2] In this film, the character Neo (Keanu Reeves) is faced with a choice between taking a red or blue pill. By consuming the red pill, Neo will awake from a simulation and be introduced to the "real world," where humans and autonomous machines are at war. By taking the blue pill, he will remain in a simulation, unaware that a parallel environment exists.

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1 Mario Carpo, *The Second Digital Turn: Design Beyond Intelligence* (Cambridge, MA: The MIT Press, 2017), 81.

2 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

While demanding a radical return to utopian thinking, Žižek speculates on the possibility of a third pill;[3] this book however seeks a heterotopic solution. It questions the assumption that these two conditions are contrary to one another, and rather asks about an option of a purple pill? A reality-virtuality continuum, oscillating between a real environment and one that is virtual, was introduced in 1994 by Paul Milgram and Fumio Kishino.[4] This concept allowed Milgram and Kishino to contextualize research centered on virtual and augmented reality. But it also contributes to the centuries-old discussion on the creation and reading of representations and images. The purple pill, in the context of this volume, is not reduced to an in-between hybrid liminal condition. Purpleness is also as ontologically autonomous (and gradient) as any other color on and, in this case, off the electromagnetic spectrum of light. Independent from the assumed virtual/physical, material/immaterial, mediated/non-mediated dualities is a purple quality. Purpleness here is a theoretical framework to investigate the impacts of technological mediation in developing possible spatial scenarios through storytelling and worldbuilding.

In the early scenes of *The Matrix,* Neo is shown to have a hollowed out copy of Jean Baudrillard's seminal work *Simulacra and Simulation*[5] where he introduced the concept of "hyperreality," representations so realistic they have the capacity to be perceived as real. Both Baudrillard and fellow philosopher and novelist, Umberto Eco, cite the example of Disneyland,[6] a physical location that sanctifies the fantastic while presenting the theme park as a "real" environment. The reconciliation of the "real" and "fantastic" as illustrated in Disneyland is a dated example of a 1950s purpleness. Today these purple experiences are readily available in the form of hybridized environments that contribute to our spatial understanding.

While Baudrillard takes a critical approach to the hyperreal quality of our contemporary material culture, including its built environment, this book embraces hybrid purple qualities. This book is an edited collection of projects and essays that consider a multitude of purple futures addressing topics such as spatial mediation, the right to space in the (un)built environment, socio-ecological connections, atmosphere making, and virtual realms. The content operates within varying scales, time periods, degrees of physicality, and virtuality, while implementing technological innovations for aspirational outputs.

The book offers the following provocations:

- What qualities constitute a purple condition in a spatial experience?
- What processes, mediums, and agents are involved in worldbuilding that consists of purple qualities and characteristics?
- How do purple qualities assist in responding to the climatic and socio-political crisis that we face today?
- How do purple qualities contribute to the atmosphere and experience of a spatial condition?

---

3 *The Pervert's Guide to Cinema*, directed by Sophie Fiennes (London, UK: P Guide LTD, 2006).

4 Richard Skarbez, Missie Smith, and Mary C. Whitton, "Revisiting Milgram and Kishino's Reality-Virtuality Continuum" in *Frontiers in Virtual Reality*, vol. 2, ed. David Swapp (London, UK: Frontiers, 2021). See also Fumio Kishino and, Paul Milgram, "A Taxonomy of Mixed Reality Visual Displays" in *IEICE Transactions: On Information and Systems*, vol. E77-D, no. 12 (IEICE, 1994), 1321–29. Fumio Kishino, Paul Milgram, Haruo Takemura, and Akira Utsumi, "Augmented Reality: A Class of Displays on the Reality-Virtuality Continuum" in *SPIE: Telemanipulator and Telepresence Technologies*, vol. 2351, ed. Hari Das (SPIE, 1994), 282–92.

5 Jean Baudrillard, *Simulacra and Simulation*, Sheila Glaser trans. (Ann Arbor, MI: University of Michigan Press, 1994).

6 Jean Baudrillard, *Selected Writings: Second Edition, Revised and Expanded*, ed. Mark Poster (Stanford, CA: Stanford University Press, 2001). See also Umberto Eco, *Travels in Hyperreality*, William Weaver, trans. (London, UK: Harcourt, 1986).

Bibliography

Baudrillard, Jean. *Simulacra and Simulation*. Translated by Sheila Glaser. Ann Arbor, MI: Univeristy of Michigan Press, 1994.

Baudrillard, Jean. *Selected Writings: Second Edition, Revised and Expanded*. Edited by Mark Poster. Stanford, CA: Stanford University Press, 2001.

Carpo, Mario. *The Second Digital Turn: Design Beyond Intelligence*. Cambridge, MA: The MIT Press, 2017.

Eco, Umberto. *Travels in Hyperreality*. Translated by William Weaver. London, UK: Harcourt, 1986.

Fiennes, Sophie, dir. *The Pervert's Guide to Cinema*. London, UK: P Guide LTD, 2006.

Kishino, Fumio and Milgram, Paul. "A Taxonomy of Mixed Reality Visual Displays," In *IEICE Transactions: On Information and Systems*, vol. E77-D, no. 12. IEICE, 1994, 1321–29.

Kishino, Fumio, Milgram, Paul, Takemura, Haruo, and Utsumi, Akira. "Augmented Reality: A Class of Displays on the Reality-Virtuality Continuum." In *SPIE: Telemanipulator and Telepresence Technologies*, vol. 2351, edited by Hari Das. SPIE, 1994, 282–92.

Skarbez, Richard, Smith, Missie, and Whitton, Mary C. "Revisiting Milgram and Kishino's Reality-Virtuality Continuum." In *Frontiers in Virtual Reality*, vol. 2, edited by David Swapp. London, UK: Frontiers, 2021.

Wachowski, Lana, and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.

Please scan the QR code for the augmented reality (AR) experience.

A note to the reader

A Purple Book

Cosmo Kramer, the eccentric neighbor in the popular American television sitcom *Seinfeld* (1989–1998),[1] is known for his often-impractical business ideas, one of which was a coffee-table book about coffee tables, that could also turn into a coffee table! We would like to think of this volume as such: a design book about design, that also functions as a design(ed) object. To achieve this Kramerian quality, we have looked into three specific publication conventions: the choose-your-own-adventure strategy, the graphic design , and the pop-up dimension.

Choose Your Own Adventure

All books, but especially edited volumes, are often consumed in a peculiarly unsystematic way, as readers jump through chapters based on their interests and impulses, and not necessarily the predetermined authoritative order that the content is presented. The convention of dividing edited volumes into thematic sections, while partially addresses this challenge, is insufficient in offering the readers the freedom they deserve. Especially because of the interwoven quality of the chapters of this book, it was critical to present its interdisciplinary readership with the agency to curate the material based on their interests. That is why we sought the solution to this challenge from a different literary convention: the choose-your-own-adventure novel. While the technique has been extended to other media, such as film, scholarly publications have yet to exhaust its potential. By offering three different roadmaps, this book equips its audience with an alternative way to approach the book. This is therefore, three books in one.

The three thematic sections, *Spatio-Visual Regimes, Post-Screen,* and *Existential Scenarios*, allow the projects discussed in the collection to be framed with three distinct critical perspectives. While each book is a collection of the same provocative, interdisciplinary purple projects, a number of distinct critical essays help contextualize them within the larger thematic agenda of each book.

Book 1 problematizes the assumed progressional historiographies of spatio-visual regimes. Book 2 addresses fuzzy cyber-physical qualities that complicate human/machine and natural/artificial relationships beyond the binaries. Book 3 disturbs orders of power, be it sociocultural systems, ecological systems, or political ones.

The choose-your-own-adventure book format can be followed through the three tables of contents or the roadmap offered at the end of each chapter.

---

1 *Seinfeld*, directed by Larry David and Jerry Seinfeld (New York, NY: NBC, 1989–1998).

Graphic Design

In addition to the choose-your-own-adventure book format, and in response to the books' themes and provocations, *A Purple Architecture* revisits the "bookhood" of the book—both as an object and a medium—through a curated design using extended reality (XR), worldbuilding, and machine-assisted visual interpretation of the chapters.

Walking on a tightrope of the black-and-white binary, the book design employs typography—letters, figures, shapes, lines, symbols, numbers, and many other textual in-betweens—to break the black-and-white duality and establish purpleness, as a desaturated quality.

The book also includes a series of image-based dividers that are cautiously crafted through an iterative human-machine collaborative design dialogue. While the prompts were limited by keywords from the chapter, each divider is a visualized artifact of a productive friction between the designer and the Generative AI. Maintaining their consistent characteristics throughout the book, each of the dividers are designed through a multi-agent process: The designer (as the main curator/creator), the Generative AI platform (functioning under a specific critical intention to maintain the human-machine collaborative dialogue), and the authors (who provided the keywords that triggered the prompt).

Virtual Pop-Up

As a purple project itself, *A Purple Architecture* aims to advance the discourse around new technological spatial mediums to blend different modes of reality through various scales and with degrees of physicality and virtuality. To further enhance this advancement, the physical book itself is augmented with a series of custom-made spatial augmented-reality (AR) experiences. The book utilizes a virtual AR pop-up format to move beyond a familiar book reading experience. Existing at the intersection of physical and virtual, the reader's or user's experience becomes a portal to introduce purple architecture (purpleness) via a series of purple cyber-physical experiences.

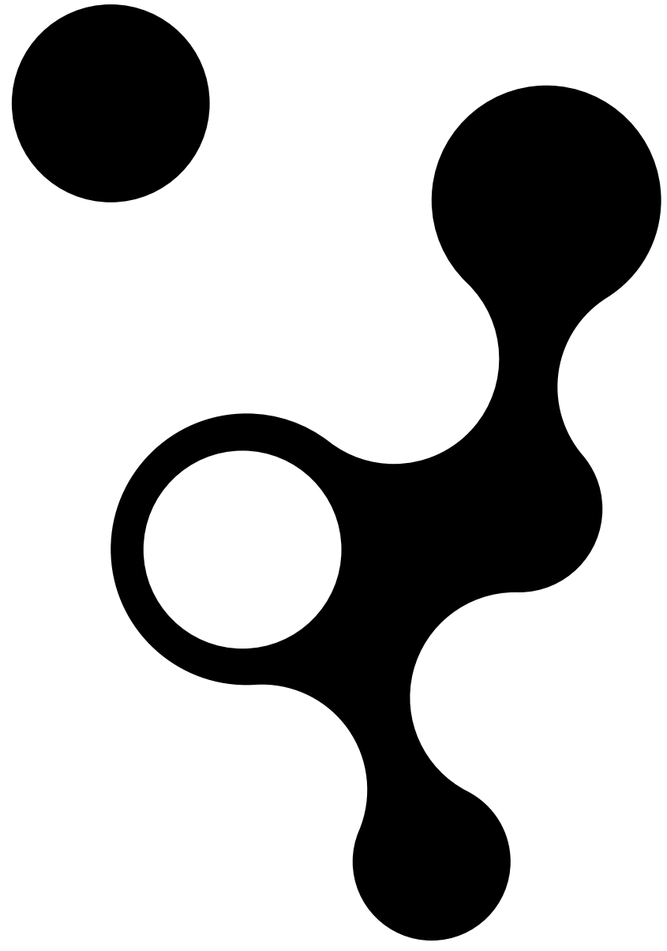
Through custom-made web-based AR applications, readers can use their smart devices—cellphones, for instance—to walk through these AR experiences, ranging from custom-designed objects and spatial experiences to sounds, interactions, and time-based media, curated and developed in response to the content. A set of selected visual triggers/targets in the book—along with several QR codes—serve as markers to initiate the AR content on readers' cellphones/browsers. Whenever the device's camera points at one of these markers, the AR experience will become available through the lens of the camera and the screen. The markers serve as the physical anchor of the AR content, expanding the reader's experience into a multimedia spatial interaction.

From individual letter-designs to choreographed negotiations between imagery and typography, to virtual objects, graphs, and semi-immersive spatial AR experiences, and from hand-crafted to machine-assisted design elements, the graphic design of the book aims to create a sensitive balance between the design independence of each chapter, section, and divider, while maintaining their overall consistency as part of a consistent purple whole.

While Kramer's *Coffee Table Book about Coffee Tables* was filled with pictures of celebrities' coffee tables, here, we have intentionally moved away from the cannon. The collection of projects presented in this book were instead selected because of the ways they questioned the norms, disturbed collective preconceptions, and refused to conform to predetermined design camps—i.e., because of their purple quality.

Bibliography

David, Larry and Seinfeld, Jerry. dirs. *Seinfeld*. New York, NY: NBC, 1989–1998.



Foreword

Graham Harman

A Purple Ontology

In an aesthetic context, the word "purple" has long referred dismissively to florid or juvenile prose. The present volume reworks the term in an important technical sense, as explained in the editors' Prologue. In the popular 1999 film *The Matrix*,[1] lead character Neo (Keanu Reeves) is famously given the choice between a blue pill and a red one. The blue pill will keep Neo safely in a simulated world that closely resembles our own, despite occasional glitches that reveal its hidden underbelly. The red pill will, if taken, reveal the true situation: a horrific landscape where humans are farmed as resources for machines. The premise of the present book is that the color purple results from an imagined chromatic and pharmacological combination of the red and blue pills. The guiding idea is that real and virtual should be rethought as belonging to a continuum rather than being separated by an unbridgeable gap. The numerous bite-sized articles in this volume, arranged in a format reminiscent of the choose-your-own-adventure books of childhood, explore the implications of this new purpleness for architecture and design.

Today it is still the case that most human activity unfolds in a physical space that we strongly identify with "reality." In this space we take precautions against physical injury. We hire laborers to move heavy items, and perhaps work as laborers ourselves. We survive thanks only to a massive agricultural industry fueled by aching human muscles and bones, watered with human sweat. These bodily struggles at the basis of civilization are never forgotten, since they also provide the material for an ongoing discourse of political indignation against those who fail to labor with their bodies, taken to be the primary interface between humans and reality.[2] In this spirit architecture increasingly seeks to legitimate itself through a guilty spirit of humility amidst the impoverished, or sophisticated panic at the near future of earth's climate. Against this new moral authority of a pauperized real, David Ruy reminds us that architecture has always been on the side of unreality.[3] The purported physical real that we seem to inhabit finds us mostly indoors, or at least in an urban outdoors covered with asphalt and sprinkled with a semiotics of neon and aluminum. Even our most exotic trips into the raw unknown of nature make use of vehicles, GPS (Global Positioning System) trackers, compasses, and other human-made implements. In this context, the disdain now shown by some architects toward the emerging virtuality seems as quaintly pompous as demands for skyscrapers of brick over reinforced concrete.

---

1 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

2 Alfred Sohn-Rethel, *Intellectual and Manual Labour: A Critique of Epistemology* (Chicago, IL: Haymarket Books, 2021).

3 David Ruy, "Returning to (Strange) Objects" in *tarp: Architectural Manual*, no. 10, ed. Sarah Ruel-Bergeron (Brooklyn, NY: Pratt Institute, Spring 2012), 38–42.

The chief philosopher of *Matrix*-like virtuality has long been Jean Baudrillard (1929–2007), viewed by his critics as the patron saint of frivolity. On a first pass Baudrillard does read like an exaggerated denier of reality and its consequences, as experienced in particular by the poor and oppressed who now serve as our default reality principle.[4] One of Baudrillard's most infamous topics, discussed in his *The Gulf War Did Not Take Place* book, was the 1991 Persian Gulf War between the Western alliance and Saddam Hussein's Iraq, denounced by the Left as an imperialist atrocity, and hypocritically enjoyed as a kind of monthlong television special.[5] It was a relatively painless war indeed for President George H. W. Bush and his assembled forces: consider the astonishing fact that fewer American soldiers died in the struggle than would have perished in car accidents at home if the war had never occurred. Yet the voice of morality cries out, as always, for the weaker party in the conflict. Did Iraq not lose up to 50,000 killed and incur as many as 75,000 injuries? The Western kingdom of darkness, it is said, shows its allegiance to evil by considering only our own minimal number of dead.

Realist philosopher that I am, I could hardly rush to the banner of simulation even if no one had been harmed in the war. Yet it would be unfair to reduce Baudrillard to the claim that "nothing is real; everything is a simulation," no matter how often such phrases appear in his books. The lesson I take from his works is not that everything around us is fake, but that regardless of whether anything we experience is real or unreal, it lures us and occupies all of our vital energies. In technical terms, it is the Baudrillard of "seduction" who interests me most.[6] Whether I gaze upon the "wretched of the earth" or a hallucinated battle of centaurs, on a Zaha Hadid masterpiece or a pixelated videogame landscape, the name of the game is fascination.[7] For any object of my attention —and this holds for the real and for the purely virtual— the way it seduces me is real. As I have written elsewhere: "Our seduction by simulacra is not itself a simulation."[8] Pessimists may revel in thinking of human beings as minions of the Lord of Lies, but each of us is actually a Midas[9] who turns everything into something simply by seeing it. This is the grain of truth in the oft-maligned starting point of René Descartes: I am seduced, therefore the object and I both are.[10]

But it may be more useful to situate Baudrillard's insights among those of other contemporary philosophers. One thinks of Peter Sloterdijk, whose notion of "spheres" struggles to find a footing among his legions of eager but mainly baffled readers.[11] There is not just an "I" thinking alone in empty space, but always an "I" in primary dyadic relation with something else: originally with the mother, putting Sloterdijk into automatic dialogue with the psychoanalysis of Melanie Klein.[12] One thinks as well of cybernetics, with the implicated observer adjusting to feedback from partly unknowable black boxes in the environment.[13] Although some scholars have made the case for cybernetics as a doctrine of praxis rather than representational theory, the dyad of thought and object need not be "interactive" to reach the desired state of purpleness.[14] One merely needs "involvement," and this can be attained by the contemplator or aesthetic beholder, whether or not there is any engineering gear on the scene. And then there is Emmanuel Levinas, too often reduced to a thinker of infinite ethical otherness, though he is just as much a champion of the sincere enjoyment of bread and cigarettes.[15]

With time running short, a word is in order about the architectural implications of this new space where real and virtual bleed together. Purple ontology, like purple architecture itself, is committed to the existence of a space where humans are seduced by objects regardless of their status outside the mind. It is essential to this situation that the human user be involved in whatever building or landscape is in question. This renders impossible any program of an architecture "without humans," as if humans were contaminating reality with their presence, rather than playing the Midas-like realist role proposed earlier. Here I cannot agree with Peter Eisenman that the real is increased in any way by the subversion of human comfort.[16] In this sense, I am also opposed to the idea of Quentin Meillassoux that we get at the real by looking either back to a time before humans evolved or forward to an era following their extinction.[17] We do not need humans to leave the room in order to isolate the real. As Peter Zumthor writes, "the sensation of beauty is not ignited by the form itself but rather by the spark that jumps from it to me."[18] The articles contained in this book deal with nothing but such sparks. They begin to shift our idea of building away from brick and mortar toward a theory and practice of environmental fascination.

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4 Jean Baudrillard, *Simulacra and Simulation*, Sheila Glaser, trans. (Ann Arbor, MI: University of Michigan Press, 1994).

5 Jean Baudrillard, *The Gulf War Did Not Take Place*, Paul Patton, trans. (Bloomington, IN: Indiana University Press, 1995).

6 Jean Baudrillard, *Seduction*, Brian Singer, trans. (New York: St. Martin's Press, 1990). See also Jean Baudrillard, *Fatal Strategies*, Philippe Beitchman and W. G. J. Niesluchowski, trans. (New York: Semiotext(e), 1990).

7 Frantz Fanon, *The Wretched of the Earth* (New York: Grove Press, 2021). On the battle of centaurs see Edmund Husserl, *Logical Investigations*, vol. 2, J. N. Findlay, trans. (London, UK: Routledge & Kegan Paul, 1970), 572. I comment on this example in Graham Harman, *Guerrilla Metaphysics: Phenomenology and the Carpentry of Things* (Chicago, IL: Open Court, 2005), 154–56.

8 Graham Harman, "Object-Oriented Seduction" in *The Ware of Appearances: Transparency, Opacity, Radiance*, eds. Joke Brouwer, Lars Spuybroek, and Sjoerd van Tuinen (Amsterdam, NL: Sonic Arts Press, 2016), 142.

9 Refers to the Greek Myth of King Midas being granted the ability to turn anything he touched into gold by the god Dionysus.

10 René Descartes, *Meditations on First Philosophy*, Second Edition, John Cottingham, trans. (Cambridge, UK: Cambridge University Press, 2017).

11 Refers to Peter Sloterdijk's trilogy *Spheres*. Peter Sloterdijk, *Spheres, vol. 1, Bubbles*, Wieland Hoban, trans. (New York: Semiotext(e), 2011). Peter Sloterdijk, *Spheres, vol. 2, Globes*, Wieland Hoban, trans. (New York: Semiotext(e), 2014). Peter Sloterdijk, *Spheres, vol. 3, Foam*, Wieland Hoban, trans. (New York: Semiotext(e), 2016).

12 Melanie Klein, *Love, Guilt and Reparation: and Other Works 1921–1945* (New York: The Free Press, 1975).

13 Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine*, Second Edition (Cambridge, MA: MIT Press, 2019); W. Ross Ashby, *Introduction to Cybernetics* (Eastford, CT: Martino Fine Books, 2015); Heinz von Foerster, *The Beginning of Heaven and Earth Has no Name: Seven Days with Second-Order Cybernetics*, Elinor Rooks and Michael Kasenbacher, trans. (New York: Fordham University Press, 2013).

14 Andrew Pickering, *The Cybernetic Brain: Sketches of Another Future* (Chicago, IL: University of Chicago Press, 2010).

15 Emmanuel Levinas, *Totality and Infinity: An Essay on Exteriority*, Alphonso Lingis, trans. (The Hague, NL: Martinus Nijhoff, 1979). For a commentary see Graham Harman, "*Jouissance* the Levinas Way" in *Political Jouissance*, eds. Nicol A. Barria-Asenjo and Slavoj Žižek (London, UK: Bloomsbury, 2024).

16 Peter Eisenman, *Written Into the Void: Selected Writings 1990–2004* (New Haven, CT: Yale University Press, 2007), 210.

17 Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, Ray Brassier, trans. (London, UK: Continuum, 2008).

18 Peter Zumthor, *Thinking Architecture*, Third Edition (Basel, CH: Birkhäuser, 2010), 77.

Bibliography

Ashby, W. Ross. *An Introduction to Cybernetics*. Eastford, CT: Martino Fine Books, 2015.

Baudrillard, Jean. *Fatal Strategies*. Translated by Philippe Beitchman and W. G. J. Niesluchowski. New York: Semiotext(e), 1990.

Bauldrillard, Jean. *The Gulf War Did Not Take Place*. Tranlsated by Paul Patton. Bloomington, IN: Indiana University Press, 1995.

Baudrillard, Jean. *Seduction*. Translated by Brian Singer. New York: St. Martin's Press, 1990.

Baudrillard, Jean. *Simulacra and Simulation*. Translated by Sheila Glaser. Ann Arbor, MI: University of Michigan Press, 1994.

Descartes, René. *Meditations on First Philosophy*, Second Edition. Translated by John Cottingham. Cambridge, UK: Cambridge University Press, 2017.

Eisenman, Peter. *Written Into the Void: Selected Writings 1990–2004*. New Haven, CT: Yale University Press, 2007.

Fanon, Frantz. *The Wretched of the Earth*. New York: Grove Press, 2021.

Foerster, Heinz von. *The Beginning of Heaven and Earth Has no Name: Seven Days with Second-Order Cybernetics*. Translated by Elinor Rooks and Michael Kasenbacher. New York: Fordham University Press, 2013.

Harman, Graham. *Guerrilla Metaphysics: Phenomenology and the Carpentry of Things*. Chicago, IL: Open Court, 2005.

Harman, Graham. "*Jouissance* the Levinas Way." In *Political Jouissance*, edited by Nicol A. Barria-Asenjo and Slavoj Žižek. London, UK: Bloomsbury, 2024.

Harman, Graham. "Object-Oriented Seduction" in *The Ware of Appearances: Transparency, Opacity, Radiance*, edited by Joke Brouwer, Lars Spuybroek, and Sjoerd van Tuinen. Amsterdam, NL: Sonic Arts Press, 2016.

Husserl, Edmund. *Logical Investigations*, vol. 2. Translated by J. N. Findlay. London, UK: Routledge & Kegan Paul, 1970.

Klein, Melanie. *Love, Guilt and Reparation: and Other Works 1921–1945*. New York: The Free Press, 1975.

Levinas, Emmanuel. *Totality and Infinity: An Essay on Exteriority*. Translated by Alphonso Lingis. The Hague, NL: Martinus Nijhoff, 1979.

Meillassoux, Quentin. *After Finitude: An Essay on the Necessity of Contingency*. Translated by Ray Brassier. London, UK: Continuum, 2008.

Pickering, Andrew. *The Cybernetic Brain: Sketches of Another Future*. Chicago, IL: University of Chicago Press, 2010.

Ruy, David. "Returning to (Strange) Objects." In *tarp: Architectural Manual*, no. 10, 38–42, edited by Sarah Ruel-Bergeron. Brooklyn, NY: Pratt Institute, Spring 2012.

Sloterdijk, Peter. *Spheres, vol. 1, Bubbles*. Translated by Wieland Hoban. New York: Semiotext(e), 2011.

Sloterdijk, Peter. *Spheres, vol. 2, Globes*. Translated by Wieland Hoban. New York: Semiotext(e), 2014.

Sloterdijk, Peter. *Spheres, vol. 3, Foam*. Translated by Wieland Hoban. New York: Semiotext(e), 2016.

Sohn-Rethel, Alfred. *Intellectual and Manual Labour: A Critique of Epistemology*. Chicago, IL: Haymarket Books, 2021.

Wachowski, Lana, and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.

Wiener, Norbert. *Cybernetics: Or Control and Communication in the Animal and the Machine*, Second Edition. Cambridge, MA: MIT Press, 2019.

Zumthor, Peter. *Thinking Architecture*, Third Edition. Basel, CH: Birkhäuser, 2010.

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A Series of Purple Intros.

Introduction

The Purple Rose of Cairo

Vahid VAHDAT

On the final session of an architectural history course that I taught back in 2015, I asked my students,

> What if the information that I had presented throughout the semester was made-up? What if I had fabricated all of it: buildings, architects, dates, manifestos? What if the Crystal Palace was an imaginary building, the futurist manifesto was fictional, Le Corbusier was a fabricated character, and there never was a school called Bauhaus? Would there be any wisdom in the story I had made up about mainstream modernism in Europe?

It is with a similar logic that I ask here, what if this introduction (or the entire book for that matter) was written by artificial intelligence (AI)? For me, the response seemed rather straightforward at the beginning: "it is the content that interests me and not its mode of authorship." But more and more had I caught myself skipping the block quotes in books and papers, in which the authors "cited" AI. See if you feel the same disinterest when reading the justification below, authored by ChatGPT:

> The dismissal of content generated by AI models like ChatGPT in academic papers, as opposed to content authored by humans, can be attributed to several factors. . . . Some individuals may view AI-generated content as lacking the originality, creativity, and critical thinking that human authors can provide. They may assume that AI simply regurgitates existing information without adding novel insights. . . . AI models like ChatGPT lack human experiences and perspectives. Readers may find content generated by AI to be dry and devoid of the personal experiences, anecdotes, and human insights that can make academic writing more engaging. . . . AI-generated content is often seen as formulaic and lacking the creativity that human authors can bring to their work. Readers may find it less engaging and interesting as a result.

Not that I am not convinced by GPT's excuse; it is rather its modesty here about AI creativity that I don't fully buy. Plus, once the question is taken to its solipsistic extreme, then perhaps the response will not be as simple: what if all content that we process through our senses is artificially generated?[1] Is the intelligence of this world (or this introduction, to keep the questions simple) worth tolerating its artificiality? Or does artificiality render its intelligence irrelevant?

1 When so early in its infancy, AI has been powerful enough that a phenomenon called "AI girlfriends" are accused of "ruining an entire generation of men," I guess this hypothetical question is not too farfetched. Liberty Vittert, "AI Girlfriends Are Ruining an Entire Generation of Men," ***The Hill,*** September 26, 2023, https://thehill.com/opinion/technology/4218666-ai-girlfriends-are-ruining-an-entire-generation-of-men/.

To approach these questions, perhaps one should start by recognizing that they are based on the problematic assumption that artificiality and naturality are mutually exclusive concepts. But "the word natural," as George Carlin proclaimed (years before Timothy Morton[2]), "is completely meaningless." "Nature," according to Carlin, "includes everything. It's not just trees and flowers. It's everything. A company's chemical toxic waste is completely natural. It's part of nature. We're all part of nature. Everything is natural."[3]

Perhaps the concept of artificiality too needs a bit of purpling. The manufactured red or blue distinctions cannot fully explain the continuum that is considered artificiality. Whether or not this text is a product of AI, one cannot deny a level of artificiality in its authorship. To prove the point, MS Word's "text suggestion" predicted the word "artificiality" in the previous sentence, while still unhappy with the grammar of "a level."[4]

Despite the pleasure that architectural theorists take from constructing compound words with the prefix "post," "postartificial" somehow remains vacant. I will thus adopt it to prescribe a blasé attitude towards a dilemma that has troubled the minds of historians of art and design for centuries—that of the copy, the fake, and now, the artificial. The emancipatory choice of intelligence (and beauty and morality, for that matter) despite artificiality perhaps requires a bit of gullibility that Cecilia (Mia Farrow), the main character of the 1985 romantic comedy, *The Purple Rose of Cairo,*[5] embodies, especially in her memorable dialogue: "I just met a wonderful new man. He is fictional but you can't have everything."

The Purple Rose of Cairo is a title of a fictional movie, shown in an actual movie with the same title. The inadequacy of the terms fictional and actual in offering any clarity to the situation is further exposed once we learn that the film's protagonist Cecilia gets involved in a romantic relationship with Tom (Jeff Daniels), a character from the film that she keeps rewatching in a theater. Reacting to her affection, Tom breaks the fourth wall of his movie and exits its filmic construct to meet Cecilia. Despite his ascendance, the viewer can see how he remains in the artificial space of another film, unable to escape the totalizing virtuality of *The Purple Rose of Cairo.* Looking at Cecilia's failed love affair, who is back at the theater, trying to fill an emotional void by compulsively consuming the artificial world of cinema, the audience, similarly immersed in a film, identifies with the character. "Is there a third layer to the virtuality of *The Purple Rose of Cairo,* in which I am immersed," the audience may ask. Are you not similarly immersed in the virtuality (and artificiality) of a text called *The Purple Rose of Cairo*? Does its artificiality matter once you are aware of it?

This awareness, which is integral to the postartificial subject, is central to the concept of "meta-virtuality." As I have argued elsewhere, "strategies of un-immersion result from awareness about the media and making the audience/user conscious of the mediation—they are in this sense 'meta.'"[6] The breaking of the fourth wall by Tom is however more than a disruptive strategy—it emphasizes the reality of the artificial, its presence, its agency, and more importantly, its capacity to mediate between the two seemingly disconnected worlds.

Perhaps the mission of this book is similar. To privilege, not necessarily the in-between space, but the capacity to roam between the two. The book thus introduces a variety of hybrid amphibian beings (objects, spaces, and artefacts), who do not claim the superhero status of Neo (Keanu Reeves) from *The Matrix*[7] (1999) but like Tom, are rather rooted in poetry, exploration, and adventure, with a daring disregard for the constructed limits of their worlds. These projects, which stubbornly resist containment in predefined spatio-visual regimes, are in need of being recognized for their mediating capacity.

Post-Foucauldian historiography has been based on "the phenomena of rupture, of discontinuity" that disrupt the chronological continuum of events.[8] Emphasizing "epistemic ruptures [that] arise with each emerging form/technology of mediation"[9] however may lead to an erroneous reading of history as evolutionary process. As I have discussed elsewhere,

> One cannot dismiss the reciprocal relationships within the entangled intermedial histories of pictorial, cinematic, televisual, digital, and immersive media, and reduce their development to some linear progressional historiography. However, the shifts from the still image to the moving image, from 2D to 3D, from predigital to immaterial, from the immobile spectator to the immersed subject, from mediated to immediate can offer new regimes of spatio-visual sensibilities, only once each phase is freed from the constraints of the previous.[10]

A purple historiography of spatio-visual regimes is therefore less obsessed with technological mutations. It does not disregard species of mediation that the blue/red historiography may see as amphibian—a transitional phase awaiting extinction. Explorations in Virtual Reality for example will flourish not despite of, but because of, advancements in Augmented Reality the same way painting expanded its scope after photography. A purple historiography thus cannot privilege reductionist color codes over the non-visible and the non-spectral. Discovering new colors requires stepping out of the spectrum of wavelengths, quite like Tom's liberation from his originally black and white filmic constraint.

2 Timothy Morton, *Ecology without Nature: Rethinking Environmental Aesthetics* (Cambridge, Mass.: Harvard University Press, 2007), 5.

3 Quotivation's, "George Carlin on the word "Natural"," Youtube, August 24, 2023, https://www.youtube.com/shorts/2hepm7DU0vo.

4 Beatriz Colomina and Mark Wigley, *Are We Human? Notes on an Archaeology of Design* (Zürich: Lars Müller Publishers Zürich, 2016).

5 *The Purple Rose of Cairo,* directed by Wood Allen (Los Angeles, CA: Orion Pictures, 1985).

6 Vahid Vahdat, "Meta-Virtuality: Strategies of Disembeddedness in Virtual Interiorities," *Journal of Interior Design* (2022): 6.

7 *The Matrix,* directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

8 Michel Foucault, *Archaeology of Knowledge*, Routledge Classics (London, New York: Routledge, 2002), 4.

9 Vahid Vahdat, "Introduction," in *Virtual Interiorities: The Myth of Total Virtuality*, ed. Vahid Vahdat, Dave Gottwald, and Gregory Turner-Rahman (Pittsburgh: Carnegie Mellon University ETC Press, 2022), xiv.

10 "Meta-Virtuality: Strategies of Disembeddedness in Virtual Interiorities," 5.

Bibliography

Allen, Woody, dir. *The Purple Rose of Cairo*. Los Angeles, CA: Orion Pictures, 1985.

Colomina, Beatriz, and Mark Wigley. *Are We Human? Notes on an Archaeology of Design*. [in eng] Zürich: Lars Müller Publishers Zürich, 2016.

Foucault, Michel. *Archaeology of Knowledge*. Routledge Classics. London, New York: Routledge, 2002.

Morton, Timothy. *Ecology without Nature: Rethinking Environmental Aesthetics.*Cambridge, Mass.: Harvard University Press, 2007.

Quotivation's. "George Carlin on the word 'Natural,'" Youtube video, August 24, 2023. https://www.youtube.com/shorts/2hepm7DU0vo.

Vahdat, Vahid. "Introduction." In *Virtual Interiorities: The Myth of Total Virtuality*, edited by Vahid Vahdat, Dave Gottwald and Gregory Turner-Rahman. Pittsburgh: Carnegie Mellon University ETC Press, 2022.

Vahdat, Vahid. "Meta-Virtuality: Strategies of Disembeddedness in Virtual Interiorities." *Journal of Interior Design* (2022).

Vittert, Liberty. "AI Girlfriends Are Ruining an Entire Generation of Men." *The Hill*. September 26, 2023. https://thehill.com/opinion/technology/4218666-ai-girlfriends-are-ruining-an-entire-generation-of-men/.

Wachowski, Lana and Wachowski, Lilly, dirs. *The Matrix.* Burbank, CA: Warner Bros. Pictures, 1999.

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Introduction to
book 2: Post-Screen

Introduction

Fuzzy Architecture; A Purple Haze

Ebrahim POUSTINCHI

> Purple haze all in my brain
> Lately, things just don't seem the same
> Actin' funny but I don't know why
> 'Scuse me while I kiss the sky
> . . .
> Purple haze all in my eyes
> Don't know if it's day or night
> You got me blowin', blow my mind
> Is it tomorrow, or just the end of time?
> —Jimi Hendrix, *Purple Haze*[1]

In his book, *The Second Digital Turn*, Mario Carpo asserts that while the first digital turn in the early 1990s visibly revolutionized design and making, the second digital turn has modified our thinking for the past decade.[2] Over the past few years, this modification has moved even further and potentially into our spatial/experiential perception and understanding. Through overlays of user interface and experience design (UI/UX design), worldbuilding, storytelling, human-machine and human-computer interaction (HMI/HCI), machine learning (ML)—with some degrees of artificial intelligence (AI), and many more, our experience—in unity and relation to the rest of the world—has been redefined; from our everyday lives to creative processes, engineering optimizations, and scientific applications.

While the majority of our spatial experience is—or at least has been—through physical interactions with space, it is evident that our perception of spatial reality has begun to become deeply synthesized during the past few years. Arguably, our physical experience of "real reality" is already mixed and structured.[3] Through the ubiquity of virtual/digital tools in our daily lives, we see the physical natural and built world in more layered ways. Virtual spaces/rooms/interactions, metaverse, web 3.0, cellphone videography, real-time image/footage editing, social media augmented reality filters, and many more are now ordinary parts of our day-to-day experiences. Whether we accept it or not, our lives are hybridized and heterogenized; we already are cyborgs.[4] These changes, undoubtedly, profoundly influence architecture as a spatial interface—an interactive negotiator between the user and the space—focusing on users' understanding, perception, and assumption of space.

---

1 Jimi Hendrix, "Purple Haze," ***Are You Experienced,*** vinyl record, Track Records, 1967.

2 Mario Carpo, ***The Second Digital Turn: Design Beyond Intelligence*** (Cambridge, MA: The MIT Press, 2017).

3 Slavoj Žižek (2017) "Ideology Is the Original Augmented Reality," Nautilus 54 (2017). Accessed November 10, 2023 https://nautil.us/ideology-is-the-original-augmented-reality-236862/.

4 Andy Clark, ***Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*** (Oxford: Oxford University Press, 2004). See also, Amber Case, ***We are all cyborgs now***, filmed December 2010, TEDWomen 2010, TED video, https://www.ted.com/talks/amber_case_we_are_all_cyborgs_now?

On the other hand, we live in a strange era where the meaning and the philosophy of physicality, digitality, natural, and artificial–among many others–are more vague than ever. Concrete definitions are breaking out of their socially and historically prefabricated frames, creating fuzzy seams. Meanings are evolving and growing beyond their boundaries and boxes; technology becomes more accessible, yet its presence becomes more and more transparent and invisible; it becomes more "absent!" In such hazy times, although things are not present as they are "supposed" to be, there are magical moments when "things" are morphing and blending into new "things."

Considering architecture a curatorial, cultural, and experiential medium that redefines/curates thoughts, space, spatial experience, media, and material through articulation and definition, some of the prefabricated disciplinary biases of architecture seem restrictive in this evolving hazy world.

Similar to the post-digital discourse and the never-ending attempts to propose a new reading of what it could possibly mean, purple architecture is a disciplinary–and interdisciplinary–provocation to seek a series of productively vague hazy speculations of what architecture–and a purple architecture in particular–can be. While I do not believe it is possible or critically valid/clever to propose a single unified definition for purple architecture, the intellectual friction between the concepts–similar to the different takes on post-digitality–can be enormously fertile and productive.

Instead of an ideological definitive answer to "what a purple architecture should be," this collection/book and its bookhood at large–its design, cyber-physical being, choose-your-own-adventure nature, and collective human/non-human authorship, among other characteristics–are provocations to question the status quo of architecture, design, and spatial experience.

One of the qualities that can frame a purple architecture and project a purple haze on it, is fuzziness; a desire, courage, and uncomfortable oddity to challenge the biased binary norms.

> In the established world of false binaries, things are either 1 or 0, true or false and maybe physical/"real" or digital/virtual. Humans–and non-humans–engaged in design projects perform in socially, culturally, and politically prefabricated hierarchical roles of creator/designer, assistant/labor, and user/audience, amongst others.
>
> We often seem too confident about/comfortable with the assumed physicality of architecture/spatial experience or our roles within the design culture; a confidence/comfort that comes from our–false–binary/Boolean logic of true or false and either/or.
>
> What if the abovementioned binary boundaries–among many others–could morph into non-binary seams? What if there were other alternative in-between spectrums and mediums for design, architecture and spatial experience? Architectural experiences that live at the intersection of virtual/"real" and digital/physical false binaries, in an interrupted/interwoven non-hierarchical world of agencies/roles; an experiential purple haze: A Fuzzy Architecture![5]

Within the conceptual structure of this book and as part of the purple architectural, experiential, and spatial spectrums, Fuzzy Architecture can be a purple umbrella concept/term to challenge/rethink some of the artificial standards of our discipline–both internally and in relation to other things/beings. Ranging from the non-binary cyber-physical medium and material opportunities to renegotiate the designer/labor/audience agencies in "less-hierarchical" proposals, fuzzy architecture–as a take on purple architecture–proposes and calls attention to sensitive media, design, conceptual or philosophical agendas, where the binary disciplinary/cultural/political conventions and biases are not taken as granted.

Arguably, digital screens are among these binaries. Screens–at their current stage–are banal, underdeveloped rabbit holes with a limited ability to connect or create hybridization. Current screens constantly remind you of the physical/virtual binary through physical "framing" of the virtual content with limited cyber-physical fusion.[6] The experience remains separated and heterogeneous.

Within the conceptual and organizational structure of this book, *A Purple Architecture*, book 2: *Post-Screen*, projects are clustered considering their fuzzy cyber-physical quality. Post-Screen–as a subclass under the Fuzzy Architecture umbrella–aims to collect the projects through their shared interest to challenge the non-immersive binary qualities of a digital screen by further hybridizing the virtual/physical experience through cyber-physical synthesis.

Whether the concept of purple architecture–or more specifically fuzzy architecture in this introduction–provokes creative/scholarly/philosophical frictions, or the idea of a fussed cyber-physical world of semi-cyborgs–humans and non-humans and everything in-between–resonates intellectually/experientially, or the notion of challenging the true or false binary norms seems pleasantly puzzling, this collection aims to offer alternatives. Alternative ways to discuss, critique, design, represent, experience, speculate, and imagine architecture; architecture as a curatorial, cultural, and experiential medium that redefines/curates thoughts, space, spatial experience, media, and material through articulation and definition.

5 From "Fuzzy Architecture" lecture-statement (Poustinchi, 2020), first proposed in January 2020 as part of the University of Tehran International Lecture series and reframed in 2021 as part of the lectures presented at the UCLA and University of Kentucky. Fuzzy here refers to the concept of Fuzzy logic; It is an approach–in computation, that is based on "degrees of truth" rather than the usual "true or false" (1 or 0) Boolean logic. The idea of fuzzy logic was first advanced by Lotfi A. Zadeh of the University of California at Berkeley in the 1960s. For more information please see: Zadeh, Lotfi A. "Fuzzy sets", Information and Control, vol. 8, no. 3 (1965), 338–53.

6 Ebrahim Poustinchi, "Post-Screen: A Criticism of Digital Screens," *Archinect*, March 22, 2019. https://archinect.com/features/article/150127525/post-screen-a-criticism-of-digital-screens

Bibliography

Carpo, Mario. *The Second Digital Turn: Design Beyond Intelligence*. Cambridge, MA: The MIT Press, 2017.
Case, Amber. *We are all cyborgs now*. filmed December 2010, TEDWomen 2010, TED video, https://www.ted.com/talks/amber_case_we_are_all_cyborgs_now?
Clark, Andy. *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*. Oxford: Oxford University Press, 2004.
Hendrix, Jimi, "Purple Haze," *Are You Experienced,* vinyl record, Track Records, 1967.
Poustinchi, Ebrahim. "Post-Screen: A Criticism of Digital Screens," *Archinect*, March 22, 2019. https://archinect.com/features/article/150127525/post-screen-a-criticism-of-digital-screens.
Zadeh, Lotfi A. "Fuzzy sets", *Information and Control*, vol. 8, no. 3 (1965): 338–53.
Žižek, Slavoj. "Ideology Is the Original Augmented Reality," *Nautilus* 54 (2017). Accessed November 10, 2023 https://nautil.us/ideology-is-the-original-augmented-reality-236862/.

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A PURPLE ARCHITECTURE

Design in the Age of the Physical-Virtual Continuum

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Introduction to
book 3: Existential Scenarios

A Purple Wonderland

Introduction

A Purple Wonderland

James F. KERESTES

One pill makes you larger
And one pill makes you small
And the ones that mother gives you
Don't do anything at all
Go ask Alice
When she's ten feet tall

And if you go chasing rabbits
And you know you're going to fall
Tell 'em a hookah-smoking caterpillar
Has given you the call
Call Alice
When she was just small
—Jefferson Airplane, *White Rabbit*[1]

The choice of an individual to navigate a technologically engrained society does not have to fall on the binary choice between a red or blue pill,[2] or the acceptance or rejection of technology as a whole. There are instead several ways to engage in the median between the polar choices through science fiction, as is demonstrated by the contents of this book.

As Isabella Hermann states, "science fiction serves as a distorting mirror and metaphor to reflect on the human condition and socio-political issues in relation to and beyond technology."[3] Hermann further explains that "even though science fiction unfolds against the background of technological development, the genre tells stories about current and timeless social issues, which do not necessarily have to do with technology, but find their expression through it."[4] The projects within this book navigate, disturb, disrupt, and reimagine orders of power, sociocultural systems, ecological scenarios, and political structures in a similar manner as the genre of science fiction. Worldbuilding and technological advancements serve as a means to explore past, present, and future relationships between humans and data, machines, each other, and nature. The following cinematic examples frame these relationships and provide context to the work of the contributors.

The depiction of large-scale corporations and their impact on civil society is a popular theme within the

1 Jefferson Airplane, "White Rabbit," *Surrealistic Pillow*, vinyl record, RCA Victor, 1967.

2 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

3 Isabella Hermann, "Artificial Intelligence in Fiction: Between Narratives and Metaphors" in *AI & Society*, vol. 38, issue 1, ed. Karamjit S. Gill (Springer Nature, 2023), 319–29.

4 Ibid.

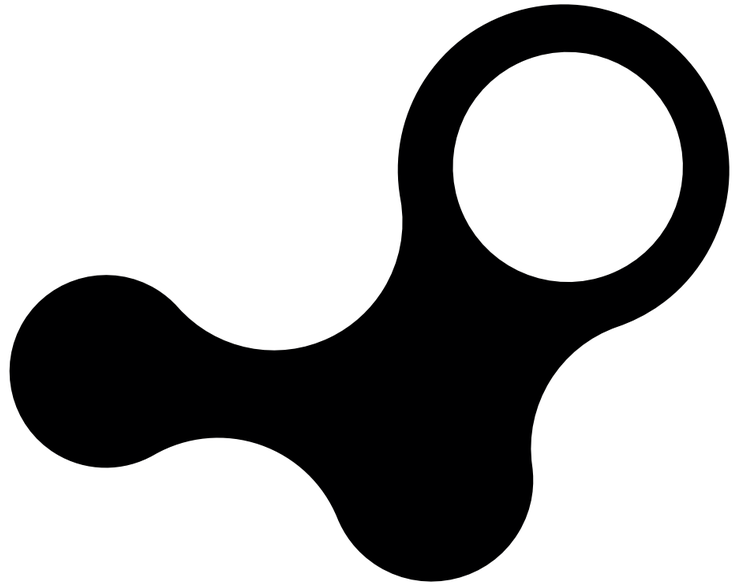
science fiction genre. In these narratives, lucrative, high-tech firms often establish economic dominance and gain political power through advancements in technological research and data collection. As a result, tasks once relegated to humans are transitioned to their non-human counterparts. For example, the Tyrell Corporation from the 1982 Ridley Scott film *Blade Runner,*[5] specializes in the production of biological androids, or replicants, to be used as laborers and soldiers in the Off-World colonies. Though it is not emphasized in the film, the backdrop behind the detective story that plays out on screen is the symbiotic partnership between the private sector and government entities, in this case, the military. The knowledge gained to produce replicants leads to the downfall of the Tyrell Corporation, as the androids rebel against their creator for minimizing their "life" expectancy. This film raises questions about the role of technology within the workforce and the inevitable displacement of the human worker.

Science fiction films routinely explore the dynamic and complex relationship between humans and machines. To that end, the underlying theme within *The Matrix*[6] film series, beyond Thomas Anderson/Neo's (Keanu Reeves) existential crisis of discovering his identity and sense of purpose, explores the consequences of choice. *The Animatrix* (2003)[7] anthology film provides more information and context to the events leading up to the first film and the time in-between the sequels. It reveals that humankind created machines in their own likeness to act in servitude to humans.[8] AI (artificial intelligence) systems followed power structures representative of human society to create classifications of machines,[9] inevitably resulting in the murder of a human by a machine. This event triggers a war between humankind and machines which eventually leads to the segregation of machines from humanity. The machines eventually settle their own territory and engage in commerce with humans, developing a prosperous economy in their own right due to advancements in AI and manufacturing. Humans responded to this shift in economic power with war, resulting in humankind's defeat and the machines dominance over the world.

Humans do not need sentient machines to rise up and cause the collapse of civilizations; humankind is more than capable of producing world altering events on their own. Alfonso Cuarón's *Children of Men* (2006)[10] takes place in the aftermath of a global ecocide which results in human infertility. The film utilizes a science fiction setting and future timeline to address topics of environmental catastrophes, police state governments, refugee crises, and the post-Anthropocene. Kee (Clare-Hope Ashitey), the only pregnant woman in the world and humanity's last hope of survival, must navigate warzones and militant groups in order to reach a safe haven for herself and child. The dystopian landscape revealed in the film demonstrates how human actions can be just as malevolent as a technological threat.

Our awareness of nature and its surroundings can be obstructed by an obsession with technology. The 2020 film *Save Yourselves!*[11] demonstrates the dire consequences when smartphone-obsessed generations refuse to disconnect from the internet and social media. The film follows a millennial couple from Brooklyn, New York who are staying at a remote cabin for a week while keeping their phones off. Unbeknownst to the couple, an alien invasion consisting of fuzzy spherical creatures occurs while they are away from technology. The aliens seek to drain the planet's ethanol resources, consuming everything from bottles of alcohol to the gasoline from cars. Throughout the film, the couple succeed in surviving without the use of technology, but in an ironic twist, the film ends with the couple being distracted by their phones and trapped inside a transparent bubble that begins to ascend in the sky. The film illustrates that while society is more connected via technology, our communication, personal interactions, and awareness of our surroundings have been sacrificed. By moving away from a dependency on technology to solve our problems, we can instead share our focus between nature and technology to address scenarios of the future.

The filmic references above and the projects presented in this book share a common goal of using worldbuilding, storytelling, speculations, and metaphors to present possible purple scenarios in the wake of real-world issues. These provocations are not limited by the confines of materiality, gravity, geographical boundaries, degrees of virtuality, or political order, but are free to aspire to more just outcomes. By infusing human values within the rapid development of technological inventions, existential scenarios can be met with optimism for future generations.



5 *Blade Runner*, directed by Ridley Scott (Burbank, CA: Warner Bros. Pictures, 1982).

6 The Matrix film series includes the following: *The Matrix* (1999), *The Matrix Reloaded* (2003), *The Matrix Revolutions* (2003), *The Matrix Resurrections* (2021), and the anthology film *The Animatrix* (2003).

7 *The Animatrix*, directed by Peter Chung, Andy Jones, Yoshiaki Kawajiri, Takeshi Koike, Mahiro Maeda, Kōji Morimoto, and Shinichirō Watanabe (Burbank, CA: Warner Bros. Pictures, 1999).

8 Ibid.

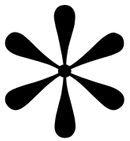
9 Isabella Hermann, "Artificial Intelligence in Fiction: Between Narratives and Metaphors" in *AI & Society*, vol. 38, issue 1, ed. Karamjit S. Gill (Springer Nature, 2023), 319–29.

10 *Children of Men*, directed by Alfonso Cuarón (Universal City, CA: Universal Pictures, 2006).

11 *Save Yourselves!* directed by Ales Huston Fischer and Eleanor Wilson (New York, NY: Bleecker Street, 2020).

Bibliography

Chung, Peter, Jones, Andy, Kawajiri, Yoshiaki, Koike, Takeshi, Maeda, Mahiro, Morimoto, Kōji, and Watanabe, Shinichirō, dirs. *The Animatrix*. Burbank, CA: Warner Bros. Pictures, 2003.
Cuarón, Alfonso, dir. *Children of Men*, Universal City, CA: Universal Pictures, 2006.
Fischer, Alex Huston, and Wilson, Eleanor, dirs. *Save Yourselves!* New York, NY: Bleecker Street, 2020.
Hermann, Isabella. "Artificial Intelligence in Fiction: Between Narratives and Metaphors." In *AI & Society*, vol. 38, issue 1, edited by Karamjit S. Gill, 319–29. Spring Nature, 2023.
Jefferson Airplane, "White Rabbit," *Surrealistic Pillow*, vinyl record, RCA Victor, 1967.
Scott, Ridley, dir. *Blade Runner*. Burbank, CA: Warner Bros. Pictures, 1982.
Wachowski, Lana, and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.



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please go to page 188

A Series of Purple Projects.

Joseph Altshuler

A Showing up in [redacted] Spatio-Visual Regimes Immersive Post-Screen Chunks Existential Scenarios Human-Human Project

Purple Playthings

Or, How We Can Have Serious Fun with Architectural Models

Has been discussed in essays by

Stephen Caffey
Kelly Bair
Ayad Rahmani

Designed by Studio EP
using MidJourney

September 23rd, 2023,
05:14 pm

Employing the keywords: [staged], architectural toy, architectural plaything, [on white background]

Purple Playthings

Or, How We Can Have Serious Fun with Architectural Models

Joseph ALTSHULER

From Models to Playthings

> "The Great Roe," Woody Allen tells us, "is a mythological beast with the head of a lion and the body of a lion, though not the same lion." In the Great Roe, the fictional and the real combine into a seamless composite. Though radically spliced, the line between myth and biology is invisible–there's no way to tell where one begins and the other ends, which part is myth and which is real. Do its front paws walk on real ground and its rear on mythic landscapes? . . . In constructing this comedic absurdity, Allen has accidentally provided us with a fitting description of the way architecture occupies the world.[1]

If we accept Sam Jacob's argument that all architecture operates in an illegible, liminal state between fictive ideology and material reality, what happens when we as architects intentionally adjust or exaggerate the conditions of both fiction and reality to reveal the seams and blurred edges between them? Architecture has a unique capacity to imagine and enact more desirable worlds than the existing world with its constraints, crises, and violence. Our attitude and techniques to create representations and models of other worlds may just bring those worlds into existence.

"Architectural playthings" are a special subset of architectural models that integrate dynamic opportunities for participation, stimulation, and animation among various audiences. By inviting input and interaction, playthings provide agency to navigate between fiction and reality. This chapter speculates on new formats and categories for architectural playthings that amplify opportunities for audiences to generate spatial scenarios by embracing multiple realities and imaginaries–physical, virtual, and animated all at once.

Much has been written and theorized about the relationship between architectural toys and the ascent of modern architecture.[2] This chapter builds upon that lineage and explores altered, augmented, and animated modifications to existing toy categories that might offer new worldmaking modalities in the post-digital age. Specifically, it uses the framework of four existing spatial toy categories–puppets, action figures, erector sets, and tangrams–as a basis to speculate on hybridized categories that exist in "purple" spaces along continuums of architectural playthings (see Figure. 1).

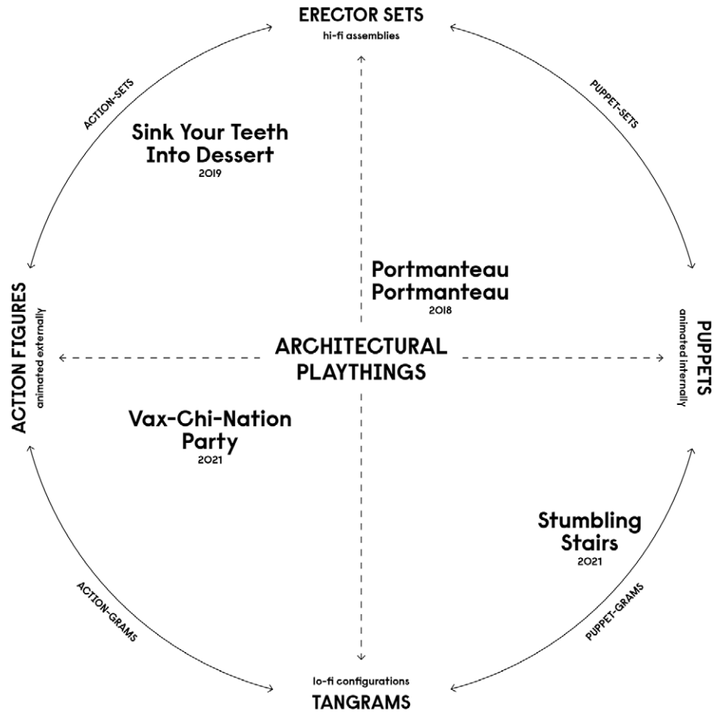

Figure 1. Matrix of Architectural Playthings, Joseph Altshuler (2023).

This chapter describes the toy categories as follows. Puppets are loosely contrasted with action figures. Puppets aspire to enact "internal animation," in which manual, mechanical, or digital stimulation enacts the fictional vitality of a character's inner life. Action figures embrace "external animation," meaning an actor from a separate world unabashedly indulges in simulating the figure's vitality. Erector sets are loosely contrasted with tangrams. Erector sets involve kits-of-parts that can be used to construct high-fidelity assemblies wherein individual components remain legible; tangrams operate through low-fidelity configurations of elemental parts that congeal into unlikely wholes whose parts fade away, like when an arrangement of triangles and squares converge to suggest the profile of a cat. These two axes generate a field of hybrid categories and continuums–"puppet-sets," "puppet-grams," "action-grams," and "action-sets"–that suggest new opportunities for architectural representation, storytelling, and worldmaking. By challenging and expanding the logic of architectural playthings, four projects by the Chicago-based architectural design practice Could Be Design provide case studies and starting points for how these design vectors might unfold in the near future. While each of these projects exemplifies four shared essential ingredients for generating "purple playthings," for succinctness, this chapter briefly unpacks one ingredient per project.

1 Sam Jacob, *Make it Real: Architecture as Enactment* (Russia: Stelka Press, 2012).

2 See, for example, Alexandra Lange, *The Design of Childhood: How the Material World Shapes Independent Kids* (United Kingdom: Bloomsbury Publishing, 2018) and Tamar Zinguer, *Architecture In Play: Intimations of Modernism in Architectural Toys* (United Kingdom: University of Virginia Press, 2015).

Puppet-Sets

In contrast to the conventional architectural narratives structured around spatial problem-solving, purple playthings provide a framework for architectural character configuration and development. In contemporary architectural practice, "character" is leveraged by architects to articulate how forms communicate identity, relationships, and agency.[3] While conventionally one might describe a space as "having character," it is increasingly possible to position a space (or spatial component) to "be a character"—an analogy that empowers a building to perform like a vital character in a literary work or film.[4] "Puppet-sets" (indicated in the upper-left quadrant of the matrix in Figure 1) invite participants to animate architectural components as characters (like puppets) and to construct highly articulated assemblies from a kit of provided parts (like an erector set).

Figure 2. *The Portmanteau Portmanteau* is a set of architectural playthings that pack multiple spatial identities into one brimming suitcase. Could Be Design with Lily Hernandez (2018).

For example, *The Portmanteau Portmanteau* (2018) packs multiple spatial character identities into one brimming suitcase and invites participants to configure and reconfigure possible character development (see Figure 2).

Just as a linguistic portmanteau seamlessly combines two existing words (e.g., "spork"), this series of architectural portmanteaux seamlessly blends nuggets of architectural identity (typologies, behaviors, aesthetics, and character) into single toy-like objects. In turn, each architectural portmanteau may be combined with other portmanteaux to form fantastic compound "sentences" within the dioramic interior of the suitcase. For example, study a "stindow" (stair + window), ponder a "porridor" (porch + corridor), or woolgather over a "woof" (wall + roof). A gridded tablecloth provides a gameboard-like base to position and rearrange each plaything into a wide variety of architectural configurations and worlds.

Puppet-Grams

In contrast to the fixed pigment and pixels of most conventional formats of architectural representation, purple playthings provide an opportunity to launch architectural parts in lively locomotion. In the Western/Eurocentric tradition, architecture is both conceptualized and constructed as a fixed, static, and permanent entity that is literally or figuratively planted in the ground. This stationary conception aspires for structural stability, moral integrity, and material and cultural permanence, and it belies the living qualities of all buildings—which in reality constantly breathe, consume fuel, emit exhaust, shift in their structural live loads, and reconfigure themselves over time in cooperation with human and nonhuman agents.[5] "Puppet-grams" (indicated in the lower-right quadrant of the matrix in Figure 1) celebrate and exaggerate the nonstationary reality of buildings by inviting participants to animate architectural components (like puppets) and to construct loose-fit configurations (like tangrams) that exemplify a world in constant, swirling motion.

For example, *The Stumbling Stairs* (2021) is a video recording of a live architectural puppet performance that features a family of "stairs" and "not stairs." Ordinary "stairs" are expected to stand still. Vibrant "not stairs" are liberated to tumble, twirl, rock, race, interlock, cuddle, ride piggyback, and climb atop one another (see Figure 3).[6] It is important to note that *The Stumbling Stairs'* cinematic sequences are not generated via stop motion (i.e., a sequence of stills). Rather, each "stair" and "not stair" puppet is controlled manually by concealed magnets that launch the cardstock figures into motion, captured live on camera. Live performance involves risk, imperfection, and in-the-moment vitality that elicits heightened engagement, entertainment, and laughter in audiences. *The Stumbling Stairs* explores how the playthings' live performance might offer architects an expanded narrative capacity to captivate audiences in the building of new worlds.

Action-Grams

In contrast to architectural models that point toward a specific constructed outcome, purple playthings provide portals into immersive other worlds that often exhibit conflicting internal realities. Conventional models often sit on a pedestal as a precious object that is completely aloof from the human audience that is viewing it. Purple playthings operate more like dioramas that construct specific scenic and cinematic viewpoints that acknowledge the gaze and participation of their audience(s). In this way, purple playthings break (or challenge) the so-called fourth wall and beckon their audience to participate in scenographic mechanisms. "Action-grams" (indicated in the lower-left quadrant of the matrix in Figure 1) invite participants to set up a scene of actors (like action figures) and to construct loose-fit configurations (like tangrams) that generate surprising scenographies.

3 Stewart Hicks and Allison Newmeyer, "Why We Got Into Character" in *MAS Context #32*, ed. Design With Company (Chicago, IL: MAS Studio, 2020), 6–9.

4 Joseph Altshuler, "Animate Architecture: Twelve Reasons to Get in Character" in *Log #33*, ed. Cynthia Davidson (New York, NY: Anyone Corporation, 2015), 127–35.

5 Joseph Altshuler and Zack Morrison, "Architecture Performing Live" in *MAS Context #33*, ed. Germane Barnes and Shawhin Roudbari (Chicago, IL: MAS Studio, 2021): 30–51.

6 See online video recording of *The Stumbling Stairs*: https://www.youtube.com/watch?v=BedJd8JA8vg

Figure 3. *The Stumbling Stairs* explores the potential for architecture to perform live by propelling an architectural part into lively locomotion. Could Be Design with Lizi Breit (2021).

For example, *Vax-Chi-Nation Party* (2021) presents a set of iconic Chicago skyscrapers and human-scale figures inhabiting an abstract interior space (see Figure 4). In contrast to their typical purpose, the scale figures do not clarify our normative understanding of the familiar buildings' "actual" size or function. Rather, they suggest an alternate reality where either the buildings are substantially smaller or the humans are dramatically bigger than we expect, initiating a heightened sense of peer companionship between both groups—some humans even sit atop their building companions as if they were over-sized furnishings. Both buildings and humans cohabitate a strange, interior space that invites repositioning and movement along its gridded gameboard-like surfaces; with a disco ball overhead, an architectural dance party may even be imminent. The literal fourth wall of this interior is removed like a dollhouse, acknowledging the viewing audience beyond and inviting them to influence or participate in the making of the perspectival scene by rearranging the action-figure-like "toys" inside.

Action-Sets

In contrast to a scaleless digital model space or a highly specified singular scale of a conventional physical model, purple playthings welcome more fluid mock-up and model spaces where multiple, contradictory, and/or disparate scale references can coexist productively in the same world. "Action-sets" (indicated in the upper-left quadrant of the matrix in Figure 1) invite participants to set up a scene of actors (like action figures) and to construct highly articulated assemblies from a kit of provided parts (like an erector set) that do not adhere to a singular scale.

Figure 4. *Vax-Chi-Nation Party*: After getting fully vaccinated, the buildings were thrilled to finally hang out together again. Could Be Design with Efrain Araujo (2021).

For example, *Sink Your Teeth into Dessert* (2019) is an architectural "layer cake" of hygiene, confections, and play, where each "layer" negotiates between different scales of worldmaking and spatial identities (see Figure 5). The top layer is an off-the-shelf faucet and sink fixture, ready for a good wash. The bottom layer operates as a circuitous web of PVC pipes and fittings at the 1:1 scale of the sink, but also as an undulating playscape at the 1:50 world of the human-scale figures. The exuberantly plumbed sink also doubles as a public candy bowl, beckoning passersby to reach a hand into its basin to retrieve brightly wrapped sweets. Taken together, the fixture-dispenser-plaything mashup emphatically avoids any singular prescription of scale to amplify the opportunities and crossovers for fictional and nonfictional inhabitants to explore a range of human activities and pleasures.

To Be Continued

Ultimately, purple playthings are representational tools that amplify architecture's liveliness and provide participatory entry points for audiences to imagine new pleasures in the built environment. By conceptualizing architecture as characters in a story, by launching those characters into physical motion, by liberating architecture to operate at multiple scales all at once, and by embracing the scenic effects of the scenarios generated, we might empower the design and enactment of architectures that operate less like an object to provide for our needs and more like a companion with whom we can sustain and enjoy a personal relationship—and with whom we might scheme alternative futures.

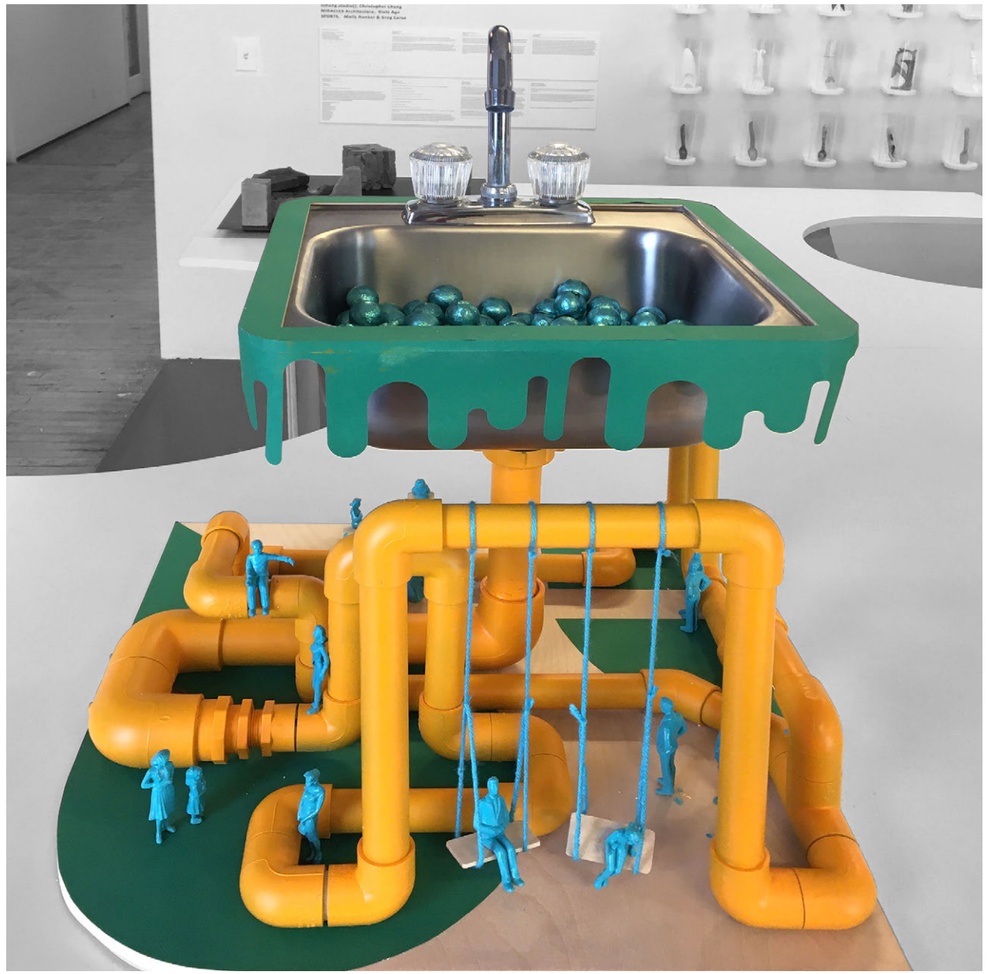

Figure 5. *Sink Your Teeth into Dessert* is a plumbing fixture, a public candy bowl, and a 1:50 scale model of a world in which the undulating piping initiates a range of human pleasures. Could Be Design (2019).

Bibliography

Altshuler, Joseph. "Animate Architecture: Twelve Reasons to Get in Character." In *Log #33*, edited by Cynthia Davidson, 127–35. New York, NY: Anyone Corporation, 2015.
Altshuler, Joseph. "Architecture Performing Live." In *MAS Context #33*, edited by Germane Barnes and Shawhin Roudbari, 30–51. Chicago, IL: MAS Studio, 2021.
Hicks, Stewart, and Allison Newmeyer. "Why We Got Into Character." In *MAS Context #32*, edited by Design With Company, 6–9. Chicago, IL: MAS Studio, 2020.
Jacob, Sam. *Make It Real: Architecture as Enactment*. Russia: Stelka Press, 2012.
Lange, Alexandra. *The Design of Childhood: How the Material World Shapes Independent Kids*. United Kingdom: Bloomsbury Publishing, 2018.
Zinguer, Tamar. *Architecture In Play: Intimations of Modernism in Architectural Toys*. United Kingdom: University of Virginia Press, 2015.

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Please scan the QR code for the augmented reality (AR) experience.

Iván Bernal, Keyla Hernandez& Brendan Ho

AI Project

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Spatio-Visual Regimes
Spatial

Post-Screen Worlds

Existential Scenarios
Human-Data

Flickers and Misfits

Magical Realism in a Purple World

Has been discussed in essays by

Dora Epstein Jones
Natasha Sandmeier
Frank Melendez

Designed by Studio EP
using MidJourney

September 21st, 2023,
03:14 pm

Employing the
keywords:
[staged], hybrid,
uncanny ecology,
magical realism,
divergent reality, misfit,
flickering, [on white
background]

Flickers and Misfits

Magical Realism in a Purple World

Iván BERNAL, Keyla HERNANDEZ, Brendan HO

Magical Realities

Perhaps every object or aspect of every day has the potential to become magical, carrying an intrinsic latency that, under the right circumstances, comes to flourish in the foreground, displaying its qualities in unexpected ways that challenge their preconceived categorization. "The marvelous begins to be unmistakably marvelous when it arises from an unexpected alteration of reality," posits Alejo Carpentier in *De lo real maravilloso americano* (*On the Marvelous Real in America*), "from the privileged revelation of reality, an unaccustomed insight that is singularly favored by the unexpected richness of reality or an amplification of the scale and categories of reality, perceived with a particular intensity by an exaltation of the spirit that leads into a kind of extreme state."[1] Carpentier's idea questions the relationship between objects and the space they occupy, drawing attention to those we like to call misfits and flickers.; objects which allow us to explore divergent realities, engendering the diverse, while seeking a kind of realism beyond overarching concepts that encapsulate our experiences. A collection of uncanny moments that make us keenly aware of our environment. An invitation to reposition ourselves in a place and time for divergent narratives to emerge.

In a recent interview about *The Matrix Resurrections* (2021)[2] with The Verge on TikTok,[3] Keanu Reeves described the plot of the original *The Matrix* (1999)[4] movie to a group of teenagers: the main character finds out that the world he occupies is a simulation and seeks to discover what is real. One of the teenagers then replied to Reeves, "Who cares if it is real?" Similarly, if we assume there is no relevance in the difference between the Matrix's virtual and physical worlds, then we should not focus on their conflict. Instead, we should pay attention to the protagonist's ability to redefine the boundaries of the Matrix. This new hybrid existence blurs the virtual and physical Matrix distinction; it allows us to break away from the binary of digital and real challenges and to consider how we situate ourselves, and the objects we design, as dwellers and hosts of multiple layered worlds and in the latent ability to flicker in and out of focus.

In *De lo real maravilloso americano*, published in 1949, Carpentier offers his unique take on the magical realities outlined by German art critic Franz Roh's magical realism essay that was translated and published in *Revista de Occidente* in 1927. Carpentier, who, despite being born in Europe, identified as Cuban, traveled extensively and was able to thread detailed connections among radically different cultures while outlining the limitations of our cultural understanding to fully immerse and comprehend the particularities of the marvelous realities that are ingrained in everyday life, expressing "Upon my return, I was invaded by the great melancholy of one who wanted to understand but understood only partially."[5] Describing the mysterious nature of the cultural nuances he experienced during his world travels, Carpentier notes the formal variations of cities and buildings as the backdrop of everyday life, from a small triangular window in Prague to Nanjin's subtle architecture to the West's angular corners and the marvelous patio inside the temple at Mitla in Mexico. Frustrated that the magical eludes him and his cultural grasp is perhaps limited, Carpentier returns to his own upbringing to propose the magical within the Americas, suggesting that the marvelous real "does not imply a conscious assault on conventionally depicted reality but, rather, an amplification of perceived reality required by and inherent in Latin America nature and culture."[6]

Much of Carpentier's position alludes to his criticism of surrealism and surrealist ambitions to produce uneasiness, banal exaggerations, or bizarre juxtapositions of life, claiming that "The result of willing the marvelous or any other trance is that the dream technician becomes a bureaucrat. By invoking traditional formulas, certain paintings are made into a monotonous junkyard of sugar-coated watches, seamstresses' mannequins, or vague phallic monuments: the marvelous is stuck in umbrellas or lobsters or sewing machines or whatever on a dissecting table, in a sad room, on a rocky desert."[7] He was calling attention to one's pace and ability to look deeper, inspect, and examine with a heightened intensity to perceive every day in a new light.

Our daily lives are filled with flickers from other worlds. These tiny flickers find small gaps in our world, fitting within our environment almost perfectly, fading in and out of our consciousness without much notice, always blending in, existing just in our periphery. They come as social media tweets and as fake palm trees to broadcast radio waves across the city. These flickers exist passively in the background and become ingrained in our daily life, attempting to become natural by not calling attention to themselves. Their effect does not manifest through their immediate appearance. Instead, it is fully grasped upon inspection, when their existence comes into question and their magic unveils itself. Opting to influence through minor variations of scale, resolutions, and projections, they create barely noticeable environmental adjustments. They are something other than what they seem. For instance, the AT&T Long Line building in New York City is not a conventional building but a bunker for an atomic attack, allegedly one of the most important surveillance sites on United States soil, as well as a skyscraper designed to be occupied by machines. The brutalist structure was designed by John Carl Warnecke & Associates in 1969, and although it has the height of a fifty-story building, it only houses twenty-nine stories in total. From the exterior, the building looks like one more skyscraper in the New York City skyline, but when looked at closely, it has no openings except for the main floor entrance and exit, and its lack of windows becomes uncanny. Under further inspection, it can be deduced that the building's occupants are other than humans, objects which do not need to look out and hosts that deteriorate under sun exposure.

Similarly to flickers, misfits exist outside of our predetermined grid and coordinate systems, demanding to recalibrate and generate new modes of navigation and occupation while provoking attention and reaction. Instead of fading into the background, though, misfits resist cohesion by producing alternate time dilations, alien qualities that are abrupt and instant. For example, in 2015, when Selgas Cano's *Serpentine Pavilion* opened in London, its strange, unusual construction of a steel frame wrapped in

1 Alejo Carpentier, "On the Marvelous Real in America" in ***Magical Realism: Theory, History, Community***, ed. Lois Parkinson Zamora and Wendy B. Faris (Durham, NC: Duke University Press, 1995), 75.

2 *The Matrix Resurrections*, directed by Lana Wachowski (Burbank, CA: Warner Bros. Pictures, 2021).

3 Keanu Reeves, "Keanu Reeves on explaining The Matrix to teens on tiktok verge," January 7, 2022, for *Celebrity Moments*, YouTube video, 0:0:51. https://www.youtube.com/watch?v=v9kIOsCnNvE.

4 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

5 Alejo Carpentier, "On the Marvelous Real in America" in ***Magical Realism: Theory, History, Community***, eds. Lois Parkinson Zamora and Wendy B. Faris (Durham, NC: Duke University Press, 1995), 77.

6 Ibid., 75.

7 Ibid., 85.

plastic landed amid the green and lush summer's background without trying to make itself comfortable. Even so, the strangest condition of this pavilion was not its candy-color-wrapped facade but that the pavilion appeared again in Los Angeles in 2019, equally disinterested in its California backdrop. Again, Carpentier guides our interpretation: "The fantastic is not to be discovered by subverting or transcending reality with abstract forms and manufactured combinations of images," he writes. "Rather the fantastic inheres in the natural and human realities of time and place, where improbable juxtapositions and marvelous mixtures exist," specifically for him "by virtue of Latin America's history, geography, demography, and politics, not by manifesto."[8] Considering how these objects implant themselves into our world, if a flicker exists passively in the background through the production of a locality, then a misfit defies any contextualization and naturalization, refusing to be ignored.

Transient Episodes

In a purple world, where blue and red pills become a purple cocktail and technology allows us to design our experiences fully, how do we embed the magical through which to bathe every day with the unexpected encounters and exhalations that only occur by the careful amplification of the familiar through the lens of our cultural and ecological landscapes? As authors of our virtual, augmented, and mixed realities, how do we engender the possibility for the magical to occur spontaneously? One attempt to answer those questions arose in the graduate-level architecture studio taught by associate professor Iván Bernal, *Transient Episodes–Panning Uncanny Ecologies* (see Figure 1). Students in Bernal's course experimented with methods and devices for designing and representing ecologies that blur their origin from anthropogenic to natural, diving into formal, temporal, and spatial compressions and expansions, seeking to em bed flickers and misfits within a purple world. The studio investigated episodic occurrences in the formation of contextless self-referential environments. Exploiting the slippage that occurs as multiple divergent environments blend, it positioned the designer to infuse the land, characters, relationships, and behaviors of multiple layered realities within the projects with the latency for objects to flicker in and out of frame.

Figure 1. *Transient Episodes – Panning Uncanny Ecologies* studio. Aileen Lin (2021).

8 Alejo Carpentier, "On the Marvelous Real in America" in ***Magical Realism: Theory, History, Community***, eds. Lois Parkinson Zamora and Wendy B. Faris (Durham, NC: Duke University Press, 1995), 75.

Transient Episodes moves from landscapes to urban settings to buildings to the domestic, stitching together multiple narratives into a single panning shot. It looks to Latin American magical realism as the framework for producing uncanny ecologies by exploring the liminal spaces we occupy in our daily routines. In the novel *One Hundred Years of Solitude* by Gabriel García Márquez, widely regarded as a literary exemplar of magical realism, time compresses, expands, and overlays; it is never a perfect continuous sequence, made clear in passages like "and once again, she shuddered with the evidence that time was not passing, as she had just admitted, but that it was turning in a circle"[9] and "Melquíades had not put events in the order of a man's conventional time but had concentrated a century of daily episodes in such a way that they coexisted in one instant."[10] In the context of the studio, magical realism was considered a shift from the mundane to the strange, or mythical, within a highly detailed and realistic environment producing the flickering between the real and the fantastical, the natural and the artificial: a purple world. Through the movement and position of the camera, the animation allows for contemplation and allocating time for the magical to surface. The fixed lens's attributes, orientation, and movement build on familiar surveying and mapping techniques to discover and understand new territories. The camera was deployed as both a character within the ecology and an inspection tool for capturing shifting degrees of resolution, revealing the marvelous, resulting in a 110-minute animation projected over a 360-degree projection lab.

In a purple world, it is crucial to revisit the origins of magical realism as a style and its evolution through the last hundred years. In doing so, we honor the importance of our own experiences and the celebration of our cultural diversity which allows for the marvelous to appear from the mundane. The smell of coffee in the morning, the Andean landscapes, the Caribbean beach, and how our upbringing provokes us to see the world in fantastical ways.

9 Gabriel García Márquez, *One Hundred Years of Solitude* (New York, NY: Harper Collins, 2006), 359.

10 Ibid., 345.

Bibliography

Carpentier, Alejo. "On the Marvelous Real in America." In *Magical Realism: Theory, History, Community*, edited by Lois Parkinson Zamora and Wendy B. Faris, 75–88. Durham, NC: Duke University Press, 1995.

García Márquez, Gabriel. *One Hundred Years of Solitude*. New York: Harper Collins, 2006.

Reeves, Keanu. "Keanu Reeves on explaining The Matrix to teens on tiktok verge," January 7, 2022, for *Celebrity Moments*, YouTube video, 0:0:51. https://www.youtube.com/watch?v=v9klOsCnNvE.

Wachowski, Lana, dir. *The Matrix Resurrections*. Burbank, CA: Warner Bros. Pictures, 2021.

Wachowski, Lana, and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.

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If you are reading the ***Post-Screen*** book, please go to page **188**

If you are reading the ***Existential Scenarios*** book, please go to page **84**

James Billingsley
& Patrick Danahy

A Project

Showing up in

[redacted]

Spatio-Visual
Regimes
Pictorial

Post-Screen
Cyborgs

Existential
Scenarios
Human-Data

Faustian Aesthetics

Through the Machine's
Semantic Severance

Designed by Studio EP
using MidJourney

September 23rd, 2023,
04:33 pm

Employing the keywords: [staged], landscape architecture, picturesque, machine learning, artificial intelligence, mediated landscape, composition, deconstruction, [on white background]

Has been discussed in essays by

Marta Nowak
Mariana Ibañez & Simon Kim
Frank Melendez

Faustian Aesthetics

Through the Machine's Semantic Severance

James BILLINGSLEY, Patrick DANAHY

Psychopolitics of Landscape Architecture

The discussion of aesthetics in landscape architecture today is so constrained as to scarcely exist, shunned in favor of functional goals, whether the so-called "performative" qualities of the landscape itself (ecological, hydrological, commercial) or second-order social effects (placemaking, community engagement, education, awareness-raising, narrative, "worldbuilding," etc.). It is not a coincidence that these functional goals align with the generally optimistic and socially responsible public images sought by corporations, developers, and governments (i.e., clients). Through its efficacy at dispensing ecological virtue and progressive imagery, landscape architecture might be considered the ideal neoliberal art form, as well-suited to the era of emotional and aspirational capitalism that Byun-Chul Han has described as "psychopolitics," as architecture was for the biopolitical paradigm that preceded it.[1]

If we make the uncontroversial assumption that corporations and the global elite are generally more concerned with the appearance of sustainability than with sustainability itself, then landscape architecture's utility to neoliberal capital is primarily aesthetic, deriving from the unique efficacy of the globally predominant picturesque style as a tool for greenwashing.[2] Recapturing the discipline's social relevance therefore requires turning away from the centuries-old stylistic tropes of the picturesque.[3] Using machine learning, we introduce new aesthetic categories to landscape representation, in turn suggesting new disciplinary politics and ecological ethics.

Historically, landscape aesthetics are inseparable from modes of production, social values, and representational technologies; and so it is natural to look to advanced computation for the necessary new tools.[4] Landscape architecture has of late been characterized as being poised at its own "digital turn," in a historical analogy with architecture's turn in the nineties.[5] Unsurprisingly, any early forays into computational design share the discipline's broader biases toward performance, focusing on ever-more sophisticated analysis of natural processes and systems and leaving the aesthetic implications of this digital turn untheorized and unexplored.[6]

It seems hard to believe now, but in early 2022, the use of machine-learning (ML) systems to generate imagery and text (i.e., OpenAI's DALL·E 2 and ChatGPT, respectively) had not become culturally widespread. Much of the initial rush to apply these artificial intelligence systems to architectural workflows has remained superficial, at the level of concept art and instant cliché, taking the place of previously exhausted generative adversarial network (GAN) aesthetics. But landscape architecture, being explicitly grounded in theories of image-making (through its conceptual roots in landscape painting), offers a more direct route from ML image generation to critical design.[7] Based on this hypothesis, we built an experimental research studio in the University of Pennsylvania's Department of Landscape Architecture, using publicly available ML systems with computer vision methods and remote computing with Google Colab (see Figure 1).

The results of the studio, along with supplementary technical research, propose a path forward past several decades' worth of "unproductive" semantic and theoretical debates about the proper role of landscape architecture.[8] A new landscape vocabulary has been generated authentically through the experimental deployment of novel technology, predicated not on performance, scenography, or ecological systems, but on the gauzy aesthetic edges separating objects in an ontologically flat landscape. This critical-technical mutuality echoes historical landscape-conceptual tools such as the famous "Claude Mirror," an analog image filter used in the framing of landscape paintings; while fundamental technical categories of digital imagery like pixelation and resolution echo the preoccupation with scale and variegation present in the historical development of the sublime and the picturesque. We hope, though, the particular qualities of computational image-making sever the imagery from the implied axis between the romantic subject and the framed wilderness.[9]

1 "Biopolitics fundamentally concerns the biological and the physical. . . . But neoliberalism, a further development—indeed, a mutated form—of capitalism. . . has discovered the psyche as a productive force. This 'psychic turn'—that is, the turn to psychopolitics—also connects with the mode of operation of contemporary capitalism. . . . Now, productivity is not to be enhanced by 'overcoming' physical resistance so much as by 'optimizing' psychic or mental processes." Byung-Chul Han, *Psychopolitics: Neoliberalism and New Technologies of Power* (London: Verso, 2017), 24.

2 This is not a new development; the Picturesque has exerted politically neutralizing effects and masked conflict since its popularization in the eighteenth century. See Jeffrey Auerbach, "The picturesque and the homogenisation of Empire," *The British Art Journal* 5, no. 1 (2004), 47–54; or Krista Reimer, "The Aesthetics of Ecology and the Ecology of Aesthetics," *Ian McBlog*, January 29, 2020, https://mcharg.upenn.edu/aesthetics-ecology-and-ecology-aesthetics.

3 Strictly speaking, the current landscape architectural mono-aesthetic combines aspects of what in their original eighteenth-century conception would have been considered separate aesthetic modes: the "picturesque" (controlled wildness, the construction of framed views, planting and material variety) and the "beautiful" (smoothness, soothing verdancy). Ecological consciousness and the virtues associated with sustainability,obviously postdate the development of these styles. But, the fundamental ontological argument of the picturesque—the conception of nature as a frame for human activity—persists to the present day; and so we argue that the term "global picturesque" is appropriate to describe contemporary landscape aesthetics. See, for example, Timothy Morton, "Zero Landscapes in the Time of Hyperobjects," *Graz Architectural Magazine* 7 (2011), 78–87.

4 For discussion of the structure of relations between landscape aesthetics and technology, see, for example, John Dixon Hunt, *Greater Perfections: The Practice of Garden Theory* (Philadelphia: University of Pennsylvania Press, 2000).

5 For a positioning of recent developments in computational landscape design relative to the "digital turn" in architecture, see Jillian Walliss, "Landscape Architecture and the Digital Turn: Towards a productive critique," *Journal of Landscape Architecture* 13, no. 3 (2018), 12–15.

6 For an alternative hypothetical pathway from landscape architecture's focus on big datasets to a novel aesthetic mode, see Richard Weller, "The Hype of Representation: Some thoughts on the roles of the hyperreal and the hyperobject in contemporary landscape architecture," *Ri-Vista. Research for Landscape Architecture* 18, no. 2 (2021), 30–39.

7 See, for example, Aaron M. Ellison, "The Suffocating Embrace of Landscape and the Picturesque Conditioning of Ecology," *Landscape Journal* 32, no. 1 (2013), 79–94.

8 Billy Fleming, "Design and the Green New Deal," *Places Journal*, April 2019, https://doi.org/10.22269/190416.

9 See, for example, Jacky Bowring, *Melancholy and the Landscape: Locating Sadness, Memory and Reflection in the Landscape* (Oxford: Routledge, 2017), 24.

Figure 1. Non-Uniform Tiling with Neural Style Transfer. James Billingsley and Patrick Danahy (2022).

Mediated Landscapes

The exploration of ML-mediated landscape image-making occupied two broad phases: preparatory research into potential novel aesthetic criteria and then the elaboration of those criteria in the form of an advanced research studio. First, we explored the use of image segmentation—essentially, territorializing edges and patches of a planar image, then we rebuilt the image using substitution algorithms derived from image compression techniques. These algorithms identify areas of relative difference within the image, projecting discrete borders onto compositional wholes with the goal of reducing the embedded image data while retaining a legibility of the original composition. Consequently, the algorithm seeks out intricacy and constructs regions based on a certain raw aesthetic self-similarity. If we then direct the machine to replace these structures with matching structures derived from unrelated sets of images, the resulting representational terrain takes on a semi-recognizable character—in particular, maintaining the hierarchies of scale and articulation. Yet it does so with defamiliarized material and textural qualities and a confused or uncanny semantic reading. Such a method directly critiques some of the fundamental qualities of the picturesque, not only first-order aesthetic tropes like textural roughness, scalar articulation, and hierarchical composition, but also their conceptual and ideological consequences. In particular, it critiques the clear ontological division of picturesque nature into passive (plant, animal, nonliving, non-European) matter and active space for human activity.

The most directly anti-picturesque quality of the machine-learning landscape is its reprojection of hierarchical space into a zone of dissolving and overlapping boundaries, where clusters of pixels bleed into one another and across which the viewer's eye moves unsteadily. In subsequent workflows, we sought to exaggerate this interconvolution, applying a multi-scalar discretization to the input image, producing even greater diversity of permeability, and with some instances of rough or abrupt edges, recapitulating the original subdivision structure, while elsewhere smoothly flowing one phenomenon into its neighbor. This complex world of jostling characters bounding themselves unpredictably and occasionally dissolving, and with no obviously "correct" scale or reference frame, offers direct analogies to a number of recent theoretical critiques of various hegemonic ontologies that underlie contemporary landscape thinking—those of Timothy Morton, Jane Bennett, Manuel DeLanda, or historically, Jakob von Uexküll, among others.

Perhaps even more satisfying and reassuring of the potential of machine-learning methods to open manifold pathways into a post-picturesque landscape architecture was the application of these inquiries to the classic format of the research studio, with all the diversity of interest and axiom that advanced students can bring to a project. For design students mostly unfamiliar with coding or computational design, we determined that the diffusion engine "Disco Diffusion" offered the most functional balance of accessibility and utility—particularly its capacity to sequence inputs and weights over time according to a "key frame" system.[10] The resulting four-dimensional complexity allows for a multi-pronged attack on the compositional, semantic, and political roots of the picturesque.

Text-based machine-learning models preserve the semantic attachment of the image to its text prompt, requiring humans to introduce contradictory prompts to force the algorithm to blur object boundaries and mix dissimilar adjacent qualities. One of these models, Midjourney, originally intended to produce vague, hazy, or scalar artifacts in the image output, allows for more exaggerated image interpretation by the viewer. Subsequent updates reducing these artifacts were lamented by some users less interested in the model's "accurate" representation of input references than in the persistent, open-to-interpretation strangeness of the image. Legibility, clarity, or "realism" can come at the cost of the novelty of output images, producing unproductive singular readings. Though many designers surely anticipate the easy deployment of these models as creativity engines to lazily fuel ideation or representation, "improved" performance and fidelity increase referentiality to input data and therefore paradoxically limit their utility for real design creativity. In fact, many features limit the utility of a model's output images. In addition to lingering legibility of input data, object placement, artifactual scale, and composition in inputs further bias the output images, as do recognizable architectural elements or scales of material, or an overreliance on the image border as a compositional frame.

Rather than rely on vague prompts or an aestheticized "weirdness" to produce novelty in diffusion images, additional techniques need to be developed to move toward the necessary semantic severance and the withdrawal of the image scale and singularity. To this end, we rejected the conception of diffusion outputs as static, fixed images, instead developing temporality through the deployment of sequential "phase-changers": after an initial prompt produces a singular aesthetic base, additional prompts are introduced over time to gradually sever the image from its original context. These phase-changers induce material, temporal, and compositional transformations, breaking down discrete ontological boundaries as objects grow and new things emerge.

10 Disco Diffusion's temporal logic of sequenced modifiers offers a useful operationalization of Ian Bogost's framework of "daisy chain" metaphors that nest recursively into the infinitesimally subdivided spaces between objects, "built on speculations on speculations as we seep farther and farther into the weird relations between objects. . . a complex lattice of sensual object relations, each carrying an inherited yet weaker form of metaphor with which it renders its neighbor. . . . The relationship between the first object and the second offers the clearest rendition, insofar as a metaphor is ever really clear. The next is rendered not in terms of the second object's own impression of the third but as the second's distorted understanding of its neighbor seen through the lens of the first." Ian Bogost, *Alien Phenomenology: Or, What It's Like To Be A Thing* (Minneapolis: University of Minnesota Press, 2012), 81.

The picturesque is a complex and resilient political-aesthetic system; its deconstruction must be equivalently multimodal. The student work selected here illustrates the diversity of critiques opened by just one semester's worth of rigorous experimentation, addressing a range of aesthetic subcategories: material and textural studies of the diffuse boundaries between particular objects; the particular compositional tropes and requirements of the picturesque image (integral to its objectification of real things into constructed landscapes); specific popular and professional landscape media, with their own sub-tropes and object qualities; and political histories of subjugation and the picturesque's traditional role in masking conflict and colonization (see Figures 2, 3, 4, and 5). Collaboration with ML systems offers not only a path out of the "suffocating embrace" of the picturesque, but also, ironically, a satisfaction of landscape architects' long held, if metaphorical, desire of designing "with" non-humans. Artificial intelligence is the ultimate "strange stranger."[11] Landscape architecture has earned its position as servitor to neoliberalism through its great skill at smoothing, greening, and socializing the flows of capital. A new landscape aesthetic of permeable boundaries and decentered composition offers an alternative path.

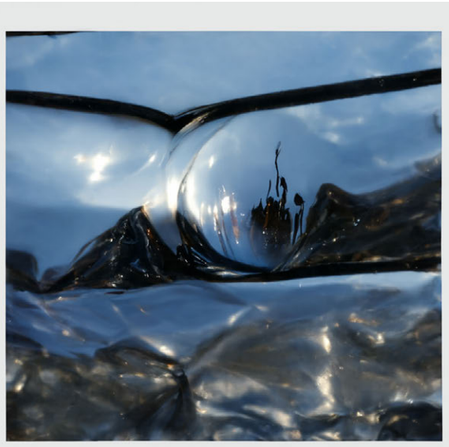

Figure 2. Phase-changers introduced into the model's base reading produce lensing artifacts in front of the picture plane with their own material qualities, breaking the naïve framing of real-world complexity fundamental to the Picturesque. Zoe Morrison (2022).

Figure 3. Cyclical daisy chains of phase-changers, applied to popular landscape media (picturesque postcards), generate indeterminate compositions where semi-recognizable iconic landscape elements bleed into one another, reducing the tropes of commercial and political constructed landscape images to absurdity through the development of impossible and contradictory scenes. Madeline Barnhard (2022).

Figure 4. Taking professional landscape architectural renderings as base images allows for a literal reading of clichéd genre conventions, introducing rich textural and affective qualities to the flat collage techniques favored by landscape architects incapable of conceiving non-objectified landscapes. Yuehui Gong (2022).

11 "Strange stranger names an uncanny, radically unpredictable quality of life-forms. Life-forms recede into strangeness the more we think about them, and whenever they encounter one another—the strangeness is irreducible. Ecological philosophy that does not attend to this strangeness is not thinking coexistence deeply enough." Timothy Morton, "Here Comes Everything: The Promise of Object-Oriented Ontology," *Qui Parle* 19, no. 2 (2011).

Figure 5. Use of socio-political prompts ("colonialism," "plantation," "migrant," "Hawaii") draws out biases and narratives latent in the machine intelligence, producing unstable images maintaining traditional compositional and stylistic landscape painting tropes while making visible modes of labor and kinds of bodies historically masked by the picturesque. Arisa Lohmeier (2022).

Bibliography

Auerbach, Jeffrey. "The Picturesque and the Homogenisation of Empire." *The British Art Journal* 5, no. 1 (2004): 47–54.

Bogost, Ian. *Alien Phenomenology: Or, What It's Like To Be A Thing.* Minneapolis: University of Minnesota Press, 2012.

Bowring, Jacky. *Melancholy and the Landscape: Locating Sadness, Memory and Reflection in the Landscape.* Oxford: Routledge, 2017.

Ellison, Aaron M. "The Suffocating Embrace of Landscape and the Picturesque Conditioning of Ecology." *Landscape Journal* 32, no.1 (2013): 79–94.

Fleming, Billy. "Design and the Green New Deal." *Places Journal*, April 2019. Accessed May 30, 2023. https://doi.org/10.22269/190416.

Han, Byung-Chul. *Psychopolitics: Neoliberalism and New Technologies of Power.* London: Verso, 2017.

Hunt, John Dixon. *Greater Perfections: The Practice of Garden Theory.* Philadelphia: University of Pennsylvania Press, 2000.

Morton, Timothy. "Here Comes Everything: The Promise of Object-Oriented Ontology." *Qui Parle* 19, no. (2011): 163–90.

Morton, Timothy. "Zero Landscapes in the Time of Hyperobjects." *Graz Architectural Magazine* 7 (2011): 78–87.

Reimer, Krista. "The Aesthetics of Ecology and the Ecology of Aesthetics." *Ian McBlog*. Accessed May 30, 2023. https://mcharg.upenn.edu/aesthetics-ecology-and-ecology-aesthetics.

Walliss, Jillian. "Landscape Architecture and the Digital Turn: Towards a Productive Critique." *Journal of Landscape Architecture* 13, no. 3 (2018): 12–15.

Weller, Richard. "The Hype of Representation: Some Thoughts on the Roles of the Hyperreal and the Hyperobject in contemporary landscape architecture." *Ri-Vista. Research for Landscape Architecture* 18, no. 2 (2021): 30–39.

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Daniel Bolojan

A Project

Creative AI in Architecture

How AI is Shaping the Future of Design

Showing up in

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Spatio-Visual Regimes
Spatial

Post-Screen Cyborgs

Existential Scenarios
Human-Machine

Has been discussed in essays by

Dora Epstein Jones
Mariana Ibañez & Simon Kim
Marjan Colletti

Designed by Studio EP
using MidJourney

September 23rd, 2023,
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Employing the keywords: [set design], [gaudi], [staged], creative ai, design, deep learning, interconnected networks, creative agency, tectonics, machine perceptions, [on white background]

Creative AI in Architecture

How AI is Shaping the Future of Design

Daniel BOLOJAN

Creative AI – Design Search Space

The application of creative artificial intelligence (AI) in architectural design is a new and rapidly growing field. We can harness the potential of new, powerful AI models to augment creative agency and expand the design search space of possibilities beyond the designer's established boundaries. These models include domain-specific or task-specific Generative Adversarial Networks (GANS) (e.g., StyleGAN, CycleGAN, Context Encoders), general domain task-specific diffusion models (e.g., Dall.E.2, Midjourney, Stability AI), and large language models (e.g., CLIP, BERT, GPT-3). Rather than viewing design as a static outcome, we can see design as a multidimensional space of possibilities that encompasses the intertwining physical constraints of the real world and the abstract, speculative concepts specific to a design stage exploration, existing in a reality-virtuality continuum.

As generative AI models proliferate and become more and more ubiquitous, it is becoming increasingly clear that the future of AI in architecture will not be dominated by a single, all-powerful AI model. Although domain-general, or general-purpose, AI models are intended to handle a wide range of tasks across multiple domains, their level of accuracy may not be as high as that of task-specific or domain-specific models. Therefore, the future will be shaped by a collection of discrete task-specific and domain-specific AI models that interact with one another. Task-specific AI models are engineered to perform a specific task and are highly accurate within their domain of expertise. Domain-specific AI models, on the other hand, are optimized for a specific field or industry and limited in their generalizability.

A present in which AI models interact with each other is rapidly approaching and raises many questions. Rem Koolhaas anticipates that, in the near future, every architectural element will be associated with data broadcasting technologies.[1] Small AIs embedded in billions of architectural elements and smart devices will interact with other AIs and human agents in an ecology of self-organizing agents. What are the interaction rules that will govern this ecology of humans and AI agents? As the distinction between the real and the simulated becomes increasingly blurred in the future, how will design be impacted? As large datasets and improved algorithms make it possible to seamlessly integrate various layers of information (e.g., conceptual, social, and material) into the design process, what will be the impact on design spaces? Will these advancements have an impact on how we understand and design?

The expression "finding a needle in a haystack" conveys the challenging task of locating a specific item among a vast array of options. In the realm of design and design exploration, this task can be more accurately described as finding a needle in a haystack that is constantly changing: a malleable, ever-learning, and ever-evolving space of possibilities. This approach signals a shift from the traditional understanding of design as a singular, fixed outcome and envisions design as dynamic and as an ongoing process. The act of design is no longer limited to the production of a single solution, with a clear separation between the various levels of design, but instead encompasses the multidimensional exploration of potential solutions and possibilities. This condition can be viewed as a purple condition, a latent condition, one that is not immediately visible or apparent but exists as potentiality or underlying possibility. Design as a latent condition—existing as potentiality rather than just actuality.

> Every block of stone has a statue inside it, and it is the task of the sculptor to discover it.
> —Michelangelo Buonarroti

Multimodality – Impressive yet Shallow

Design is, by John Gero's assertion, one of the most complex and sophisticated human behaviors.[2] It encompasses a multimodal approach that utilizes mediums such as sketching, text, painting, rendering, or 3D modeling at different levels of abstraction.[3] Architecture, and by extension the architectural design process, is inextricably linked to a multitude of interconnected and interrelated systems, according to Christoper Alexander.[4] To what extent can AI models be integrated into architectural design to address the complexity of the design process?

Looking at current AI models, one could argue that AI models are approaching human-level intelligence, but there is still a long way to go. These models can perform impressive feats, such as image and language synthesis or domain transfer. They can engage in conversation with humans. Yet just because they can do these things does not mean they understand what they are doing. For example, an AI model might be able to generate a realistic image of a building, but it does not understand that the image is of a building, or even more importantly what a building is. Similarly, an AI model might be able to give accurate predictions, but it does not understand why the prediction is accurate. Yann LeCun argues that the limitation of AI models in architectural design does not stem from their inability but rather from the constrained nature of the modalities on which these networks are trained.[5] Despite their proficiency in language and imagery, their understanding remains superficial.

1,000 AI Models - Creative Agency

The complexity of design and the design process cannot be approximated by a model trained on a single modality alone. Rather than focusing on one large AI model, the *Gaudi+NeuralNetworks*[6] (see Figure 1) and *Deep Himmelblau*[7] projects aim to develop a node-based system that can address specific design tasks and learn multimodal design representations. In this system, different design

236
280
318

1 Daniel Davis, "How Big Data Is Transforming Architecture," ***Architect Magazine***, April 23, 2015. https://www.architectmagazine.com/technology/how-big-data-is-transforming-architecture_o.

2 John Gero, "Ten problems for AI in Design," (paper presentation, International Joint Conference on Artificial Intelligence Organization, Sydney, Australia, August 1991).

3 Daniel Bolojan, Emmanouil Vermisso, and Shermeen Yousif, "Is language all we need? A Query into Architectural Semantics using a Multimodal Generative Workflow," *POST-CARBON, Proceedings of the 27th International Conference of the Association for Computer Aided Architectural Design Research in Asia* 1 (2022): 353–62.

4 Christopher Alexander, "Systems Generative Systems," ***Architectural Design*** 38, (December 1968): 605–10.

5 Jacob Browning and Yann Lecun, "AI and the Limits of Language," ***Noema Magazine***, August 23, 2022, https://www.noemamag.com/ai-and-the-limits-of-language/.

6 Daniel Bolojan, "Creative AI: Augmenting Design Potency," ***Architectural Design*** 92, no. 3 (April 2022): 22–27.

7 Wolf D. Prix, Karolin Schmidbaur, Daniel Bolojan and Efilena Baseta, "The Legacy Sketch Machine: From Artificial to Architectural Intelligence," ***Architectural Design*** 92, no. 3 (April 2022): 14–21.

levels can be addressed and learned in their respective modalities. Basically, a node-based system is a modular architecture that utilizes interconnected nodes to represent various tasks or functions. Each node represents a distinct task, and the nodes are interconnected in a network that is tailored to the specific design task at hand. Within this framework, design is not regarded as an optimization towards a goal, but rather a multivariable negotiation/interaction between various AI models with similar or competing objectives. Our brains operate in a similar manner; according to Jeff Hawkins, the brain works like thousands of brains at once.[8] The brain produces numerous models of each object using varied sensor inputs (visual, auditory, tactile, etc.). These models reach an agreement on what they are experiencing, leading to what we perceive as the object.

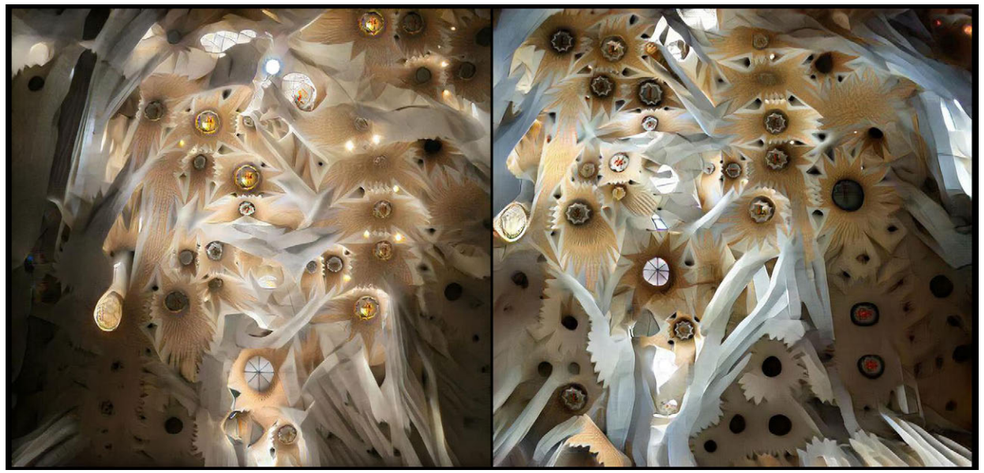

Figure 1. *Gaudi+NeuralNetworks*. Daniel Bolojan (2021).

To address discrete design tasks at various abstraction levels, a node-based Creative AI model composed of several discrete neural networks with varying modalities and tasks is developed in the project *Gaudi+NeuralNetworks* (see Figure 2). The node-based architecture enables the creation of various relationships between the many AI agents based on the design task at hand and allows for the combination, blending, and swapping of semantic levels between the nodes. Depending on the design task, the interaction rules between the networks can be adversarial or cooperative. Some of the nodes are domain-specific, whereas others are domain-neutral. Some nodes have an image-based modality while others have a text-based or geometry-based modality.

The framework of interconnected nodes approaches design as a latent condition whose multi-dimensionality can be investigated through a collaborative interaction process between humans and AI agents. The shared agency established between human designers and AI agents allows for the creation of feedback loops across different scales of design and enables design explorations by shaping, warping, and expanding the latent design space of possibilities. This approach could assist human designers in overcoming their own human constraints and recognizing patterns that they are unable to perceive, since the process widens the design space beyond the accepted boundaries, therefore opening new realms of possibility. Will the human agent be able to evaluate the AI agent's conclusion and insight, or will it dismiss its results? As Wolf Prix highlights in a discussion about *Deep Himmelbrau*, humans tend to become "obedient in advance,"[9] meaning that our ability to evaluate potential solutions is limited by our past experiences and training. We can observe this obedience, or limitation, also in the collaboration between human and AI agents in design; the human designer's ability to evaluate and incorporate the AI agent's conclusions and insights may be hindered by past experiences and biases.

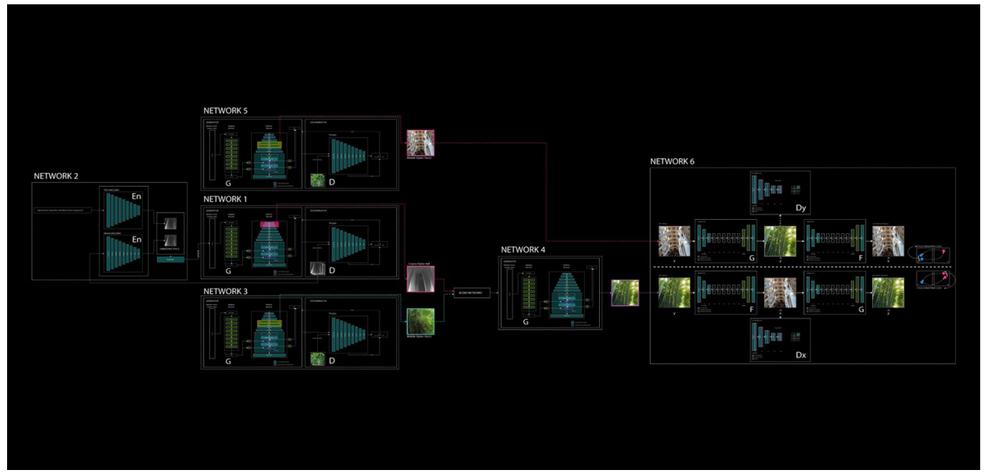

Figure 2. *Gaudi+NeuralNetworks*, a node-based structure composed of six discrete neural networks with varying modalities. Daniel Bolojan (2021).

8 Jeff Hawkins, *A Thousand Brains: A New Theory of Intelligence* (New York, NY: Basic Books, 2021).

9 Wolf D. Prix, "the Project Himmelbau," February 23, 2021, for FAU School of Architecture Lecture Series Spring 2021, YouTube video, 1:40:47. https://www.youtube.com/watch?v=mseeDE2FUhl.

Bibliography

Alexander, Christopher. "Systems Generating Systems." *Architectural Design* 38 (December 1968): 605–10.

Bolojan, Daniel, Emmanouil Vermisso, and Shermeen Yousif. "Is Language All We Need? A Query into Architectural Semantics Using a Multimodal Generative Workflow." *POST-CARBON, Proceedings of the 27th International Conference of the Association for ComputerAided Architectural Design Research in Asia* 1 (2022): 353–62.

Bolojan, Daniel. "Creative AI: Augmenting Design Potency." *Architectural Design* 92, no. 3 (April 2022): 22–27.

Browning, Jacob, and Yann Lecun. "AI and the Limits of Language." *Noema Magazine*, August 23, 2022. https://www.noemamag.com/ai-and-the-limits-of-language/.

Davis, Daniel. "How Big Data Is Transforming Architecture." Accessed June 1, 2023. https://www.architectmagazine.com/technology/how-big-data-is-transforming-architecture_o.

Gero, John S. "Ten Problems for AI in Design." Paper presented at the International Joint Conference on Artificial Intelligence Organization, Sydney, Australia, 1991.

Hawkins, Jeff. *A Thousand Brains: A New Theory of Intelligence*. New York, NY: Basic Books, 2021.

Nagarajan, Vaishnavh, and J. Zico Kolter. "Gradient descent GAN optimization is locally stable." Paper presented at the Thirty-first Conference on Neural Information Processing Systems (NeurIPS), Long Beach, California, 2017.

Prix, Wolf D., Karolin Schmidbaur, Daniel Bolojan, and Efilena Baseta. "The Legacy Sketch Machine: From Artificial to Architectural Intelligence." *Architectural Design* 92, no. 3 (April 2022): 14–21.

Prix, Wolf D. "the Project Himmelblau." February 23, 2021 for the FAU School of Architecture Lecture Series Spring 2021, YouTube video, 1:40:47. https://www.youtube.com/watch?v=mseeDE2FUhI.

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A PURPLE ARCHITECTURE

Design in the Age of the Physical-Virtual Continuum

Galo Canizares &
Stephanie Sarley Delgado

A Project

A Paradox

Complexity, Contradiction, and Literalness in Architecture

Showing up in

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Spatio-Visual
Regimes
Metavirtual

Post-Screen
Systems

Existential
Scenarios
Human-Data

Has been discussed in essays by

Ryan Scavnicky
Janice Shimizu
Frank Melendez

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using MidJourney and
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September 23rd, 2023,
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software, digital materiality,
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A Paradox

Complexity, Contradiction, and Literalness in Architecture

Galo CANIZARES, Stephanie SANG DELGADO

Complexity and Contradiction

We like complexity and contradiction in architecture, but perhaps not in the same way as architect Robert Venturi. Whereas Venturi's oft-rehearsed "complexity and contradiction"[1] refers to a strictly formal or visual appreciation of vernacular assemblages, our interest in these two terms stems from their potential to reveal underlying paradoxes in architectural works and narratives. In other words, we argue that perhaps the most complex and contradictory products that architects produce are not objects and forms, but instead the stories these products tell about their subject positions on architectural media and culture. Rather than put forth a dogmatic methodology for producing architectural artifacts, this point of view opens up the discourse of contradiction (or, more theoretically, dialectics) in architecture to encompass contradictory "thinking" and paradoxical processes that may shed light on how the built environment could be both designed and experienced differently.

Through examples from our own catalog of recent projects, the following summarizes our subject position on contradictory thinking, paradoxes, and abstraction in architectural design processes. We put forth a prototypical theory of literalness, built upon the inherent contradictions embedded in linguistic use of the word "literally," as a mode of producing as well as discussing architectural media (e.g., drawings, images, and installations). For our nascent practice, this framework has enabled the production of highly experimental projects that range from installations to speculative buildings to software.

The Literal

Like many words in the English language, the term literally has been so often misused that in recent years its distorted meaning has become accepted as a norm. While "literal" remains defined as something "free from exaggeration or embellishment," dictionary entries today have resigned to popular culture and admit that literally may in fact be "used in an exaggerated way to emphasize a statement or description."[2] This casual use of the word has so effectively transformed its meaning that literal's adverbial form can, by the authority provided by dictionary committees, now refer to the noun's opposite. For us, this mutability of the English language is particularly useful as it reinforces the notion that correctness relies on social agreement. To use something such as a word or phrase incorrectly does not necessarily suggest a failure of structure—it can instead be an opportunity for restructuring.

To seize this opportunity for architectural design, a discipline with both many orthodoxies and many paradoxes and contradictions, consider the notable claim summarized by Robin Evans that architects do not make buildings; they make representations of buildings.[3] If this is true, architectural representation is fundamentally a literal act as it can be boiled down to the contradiction that architectural knowledge is about making buildings, but that knowledge can also exist without making any buildings at all. Moreover, if we understand the spectrum of representation to run from realism to abstraction, then the middle of this spectrum could be where the literal resides: the place where things are what they are, but at the same time are exaggerated forms of themselves (see Figure 1). The literal plays a Duchampian game familiar to surrealists and Dadaists in which a painting of a pipe with the text "this is not a pipe" written on it creates a sense of perplexity. The perplexity is not whether the object being represented is indeed a pipe; rather, as Evans explains, it is a question regarding the medium and social semantics of the pipe: Is a pipe made of paint still a pipe?

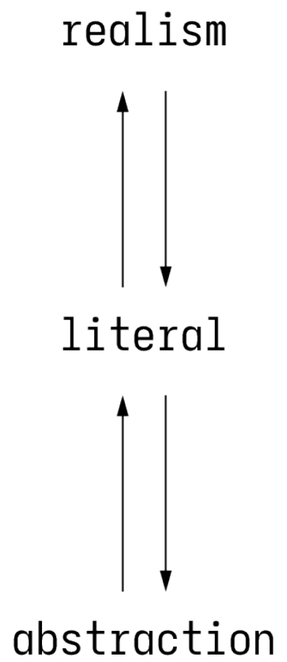

Figure 1. Literal Diagram. Galo Canizares and Stephanie Sang Delgado (2020).

The literal offers a set of insights into how contradictory thinking can open up design methodologies. It fits into discussions of "purpleness" through its both/and ontology (purple is both 100% red and 100% blue in RGB color space, for example). We are specifically interested in methods that offer intersectional and nonbinary approaches to design. As such, we put forth the following axioms for a theory of literalness:

1. Literally means both itself and its opposite and thus breaks the either/or binary. Simultaneity and opposites can coexist.
2. To be literal is to be both sincere and exaggerated at once, depending on the context. Objects can be what they are, but also larger than themselves.
3. The literal caters to multiple audiences: those that are interested in things as they are and those that are interested in the things' limits.
4. The literal is not entirely hyperrealistic nor quite abstract, and at times it could be considered banal.

We are interested in the literal because it is inaccurate, awkward, and absurd, and it yields many potential misreadings and narratives. While realism focuses on being true to life in an idealized way, and abstraction seeks to break it down, the literal is an alternative that replicates our daily life in all of its strangeness. It is quotidian. It is everyday. Like Duchamp's pipe, it depends very much on its context. The literal also upends expectations and skirts any predetermined actions. It may also lead to surprising conclusions. We have found that literalness yields a kind of complexity and contradiction that can be explored at various scales of architectural production, from speculative design experiments to real-world construction. This is where our work lives.

1 Robert Venturi, *Complexity and Contradiction in Architecture* (New York, NY: The Museum of Modern Art, 1977).

2 *Merriam-Webster*, s.v. "literally (*adv.*)," Accessed 8 September, 2022, https://www.merriam-webster.com.

3 Robin Evans, *Translations from Drawing to Building* (United Kingdom: MIT Press, 1997).

Digital Materiality

To further explain how we use the literal in our work, let us examine a contemporary contradiction: digital materiality. While "digital" refers to an abstraction of information processed as discrete units, the "materiality" most often discussed in reference to digital matter in design is not its physical structure, as would be the case when discussing the materiality of brick, for example. Rather, the focus tends to be on the imagery rendered visible through an interpretation of its discretely ordered information. What is typically important in a JPEG of a brick is the visual representation of a brick, not the binary data that the representation is made of. But what happens when the JPEG of the brick is corrupted or scrambled? What does this matter represent when its structure is manipulated? Is it still a picture of a brick?

Figure 2. *NFT House*: Exterior Rendering. Galo Canizares and Stephanie Sang Delgado (2021).

Digital materiality is much more than an interpretation of a digital file's representative potential. As N. Katherine Hayles and Todd Gannon have written, "Materiality, far from being given by an object's physicality, is an emergent event. . . . [It is the] conjunction of attention and attributes, focus and physicality."[4] If we understand it from a "literal" perspective, a digital file can be decisively contradictory and complex. Its materiality can refer to its subject, its content, its resolution, its byte size, its hexadecimal structure, its formatting, and other attributes. Thus, an image or even a 3D scan of a brick is both a representation of a thing and another thing itself with its own structure and material qualities: something both figurative and literal.

This duality between the model and image as representations and actualities is a paradox our work embraces. For example, *NFT House 01* was designed around the following question: If software eliminates the memory of labor by prioritizing finished work (renderings, drawings, models), then how do we compensate for the relationship between software-based labor and the intangibleness of digital media (see Figures 2 and 3)? Following the tradition of self-serve architectural plans and drawings, we designed a comprehensive schematic set of documents for a simple house that could be traded on the blockchain as a set of NFTs (non-fungible token), a unique form of trackable information. For this house, the tokens work like a commodity or social agreement. They set the rules for who can own and build this

4 N. Katherine Hayles and Todd Gannon, "Virtual Architecture, Actual Media" in *The SAGE Handbook of Architectural Theory*, ed. C. Greig Crysler, Stephen Cairns, and Hilda Heynen (London: SAGE Publications Ltd, 2012).

Figure 3. *NFT House*: Interior Rendering. Galo Canizares and Stephanie Sang Delgado (2021).

house. The house design here takes a backseat to the concept of digital materiality. It is a simple house, and it can be built in a straightforward manner. However, the fact that it is tied to a decentralized ledger of transactions entangles the house in a discussion about ownership, design, labor, and the value of purely virtual media.

Lightweight Construction, on the other hand, is a project about our conceptions of digital materials and tectonics (see Figure 4). The project revolves around a set of uncanny high-fidelity simulations of traditional architectural materials misbehaving. Walls made of brick slump, Oriented Strand Board (OSB) panels flutter in the wind, and 2x4 studs wiggle as if made of rubber (see Figures 5 and 6). A purely virtual work-in-progress that exists as a collection of three-dimensional data, two-dimensional images, and videos, it calls attention to the new elements of architecture, which are rooted in informatics and the processing of data. The polygon, the UV map,[5] the graphics shader, and the raster image are all core (yet completely intangible) components of contemporary architectural production. Whether we are aware of them or not, they dictate both the aesthetics of our artifacts as well as prescribe ways to work with the artifacts. Although these elements have not replaced the traditional elements of architecture, they nevertheless constitute a new paradigm of knowledge that must be considered in architectural design.

5 UV mapping is the technique of unfolding 3D objects into 2D surfaces, to create image-based textures.

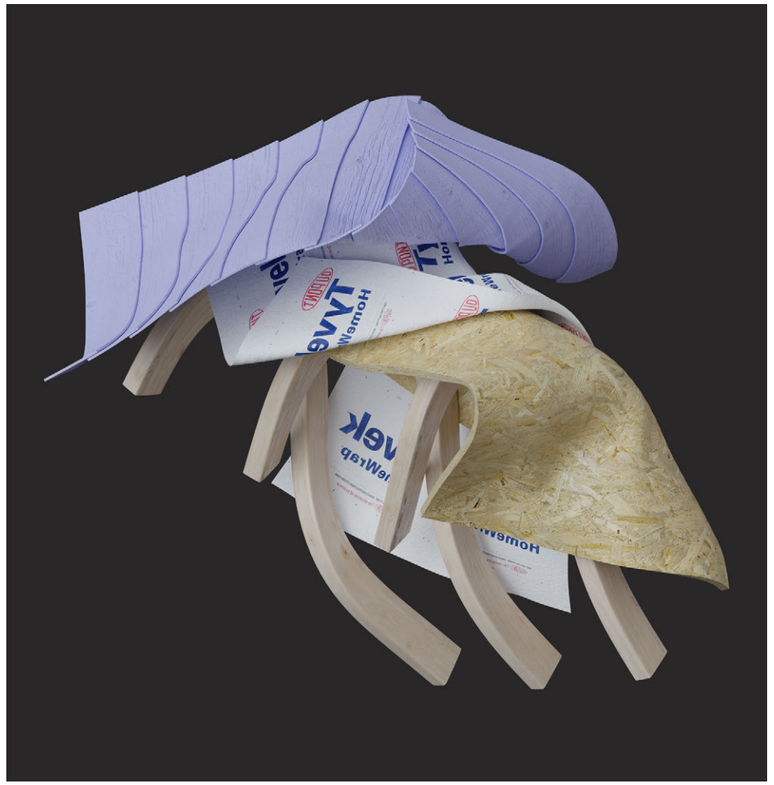

Figure 4. *Lightweight Construction:* Simulation. Galo Canizares and Stephanie Sang Delgado (2021).

Embracing Contradictions

Architecture today lives in two realms: one virtual, the other actual. By ignoring one or the other, we do a disservice to the role of digital techniques and their sociocultural influences. We must understand that the digital operates in an incredibly complex way and embodies many contradictions and paradoxes. At times, the virtual world has been described as a mirror world and digital buildings are often referred to as "digital twins." While these may be apt ways to familiarize oneself with these mediums, they still skirt the core contradictions at play. These contradictions, like the term literally or the "purple pill," are not hindrances but opportunities for richer forms of engagement. Architectural designers need to embrace them and test the limits.

Figure 5. *Lightweight Construction*: Job Site. Galo Canizares and Stephanie Sang Delgado (2021).

Figure 6. *Lightweight Construction*: Job Site. Galo Canizares and Stephanie Sang Delgado (2021).

Bibliography

Evans, Robin. *Translations from Drawing to Building*. United Kingdom: MIT Press, 1997.
Hayles, N. Katherine, and Todd Gannon. "Virtual Architecture, Actual Media" in *The SAGE Handbook of Architectural Theory*, edited by C. Creig Crysler, Stephen Cairns, and Hilda Heynen. London: SAGE Publications Ltd, 2012.
Venturi, Robert. *Complexity and Contradiction in Architecture*. New York: The Museum of Modern Art, 1977.

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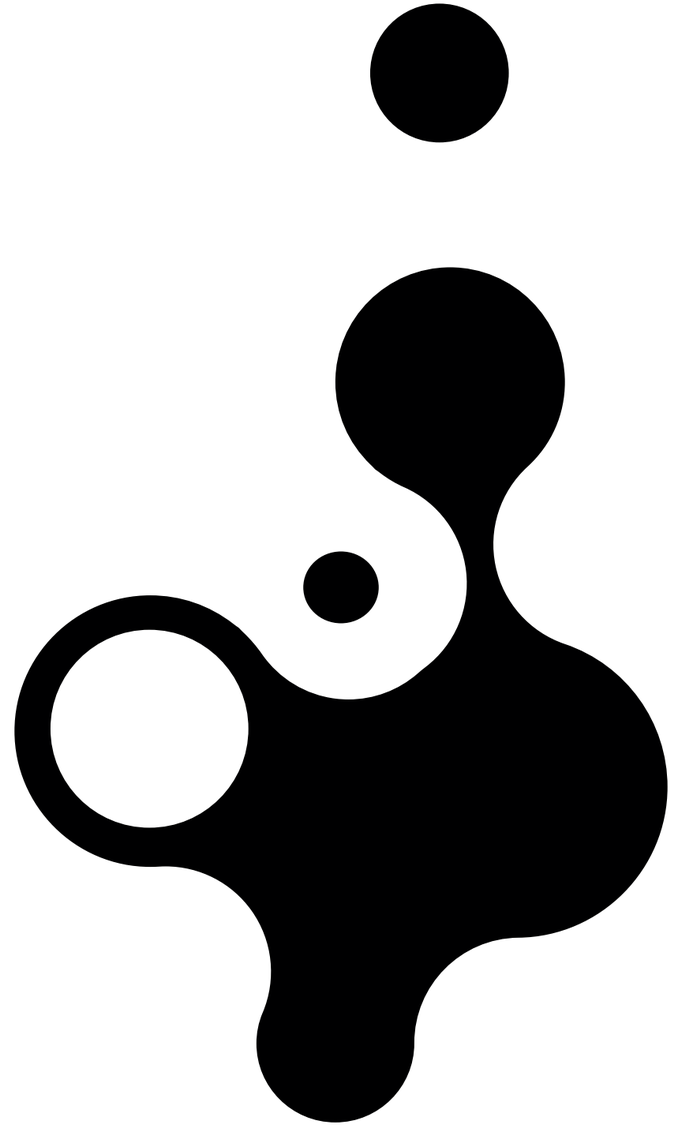

Please scan the QR code for the augmented reality (AR) experience.

Alayna Davidson

A Projection

Showing up in

[redacted]

Spatio-Visual Regimes Metavirtual

Post-Screen Worlds

Existential Scenarios Human-Data

Dope Sh*t

. . . Just Read It

Designed by Studio EP using MidJourney, DALL.E. 3, and Runway

September 24th, 2023, 10:17 am

Employing the keywords: [staged], [architectural object], slang , pop-culture, pop art, trends, AR, temporality, spatial experience, [on white background]

Has been discussed in essays by

Ryan Scavnicky
Natasha Sandmeier
Frank Melendez

*Dope Sh*t*

. . . Just Read It

Alayna DAVIDSON

Slang Aesthetics Hits Different

> DOPE /dōp/
> adj.
> 1. A word that describes something that is extremely cool, such as music, clothes, people, etc.[1]
>
> SHIT /SHit/
> n.
> 1. Anything. Absolutely anything, be it good, bad, or neither. Shit altogether replaces the words: stuff, things, and other such placeholders. Shit is the ultimate sentence filler, capable of carrying great importance or complete uselessness.[2]

Slang within modern culture is the popular ability to communicate, and embedded in each word is an implied aesthetic commonality, or "slang aesthetic." When mixed with architectural language, form, and trends, slang aesthetics is a visual and spatial representation of a particular word that maintains the ability to change as popular culture shifts. Slang aesthetics is an implied style based on the emotion or quality the word emits. To create this visual language, we must reverse the process of speaking and use the emotion subscribed to each slang term to fulfill its aesthetic, spatial, and formal needs.

Take the word "extra" for example, as seen in Figure 1. Here you see an image that focuses on creating a temporary pop-up venue located in the public spaces of downtown Los Angeles. Formally found through adaptive use of artificial intelligence (AI) generative forms, pop-culture references, and the banal surroundings of Los Angeles streets, architectural trends are updated into a "slang aesthetic" where the space now visually represents *the Extra*.

> It's blinged out, screaming for attention. All signs point to ME. Very boujee instagram baddie vibes.

The form takes on *the Extra* by adding ornamentation to the extreme. While *the Extra* could have qualities similar to the Baroque or Rococo, slang aesthetics is not a means of modern replacements of familiar and traditional styles within architecture, but an entirely updated way of creating form, detail, and decoration to fit within modern culture. While the previous architectural styles could surely be defined as extra, *the Extra* demands more. For instance, by taking many previous styles of architecture

1 Urban Dictionary, s.v. "Dope," accessed July 12, 2020, https://www.urbandictionary.com/define.php?term=Dope.

2 Urban Dictionary, s.v. "Shit," accessed August 1, 2006, https://www.urbandictionary.com/define.php?term=shit.

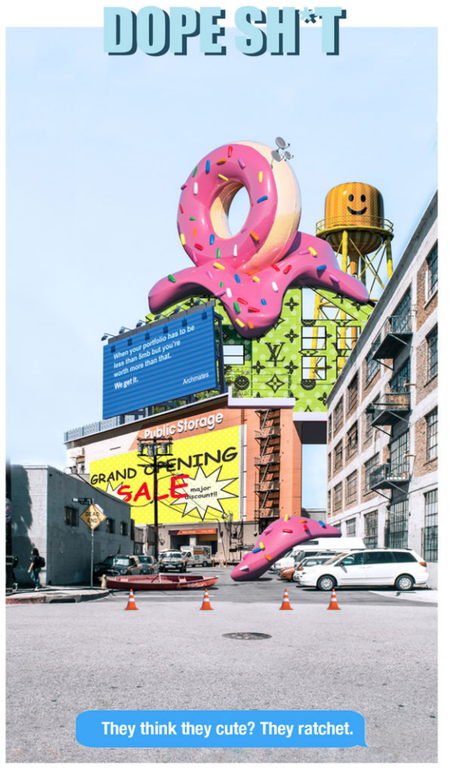

Figure 1. ✨*the Extra*✨. Alayna Davidson (2019). Figure 2. *the Ratchet* 🤡. Alayna Davidson (2019).

(e.g., Tudor, Victorian, and contemporary) and mixing them together in a way that calls attention to all aspects of its form, function, decoration, and detail in abundance, the viewer is creating *the Extra* in its current definition.

Two other examples of slang aesthetics can be seen through the terms "ratchet" and "thicc" (see Figures 2 and 3).

> *Ratchet* is so bad that you love it. It's decked out in knock offs and everything about it is sus. The next one is juicy thicc, really messing around with form and creating crazy comfy spaces where the volume truly speaks volumes.

Here, like *the Extra*, *the Ratchet* and *the Thicc* use the emotion behind the slang definition to build out a formal and functional aesthetic way of creating new architectural pieces. *The Ratchet*, for example, by definition does not make sense, making viewers question what they are witnessing and what emotions they are feeling. Starting at the bottom, the viewer sees a public storage building with a large opening

sale sign. Above it is a billboard flashing architectural memes, a building decked out in a Louis Vuitton knock-off print, and a water tower. Finally, the building is adorned with a dripping, chocolate donut hooked up with a few satellite dishes. It formally does not make sense with these mentioned ingredients, but it functionally does not make sense either. *The Ratchet* will make the viewer question all aspects of this architectural creation to truly embody *the Ratchet*.

Figure 3. *the Thicc* 🍑. Alayna Davidson (2019).

By transforming slang as an architectural language to define form, trends, and aesthetics, we are able to update the architectural discipline to fit and communicate with its current and future audience.

Slang Aesthetics Got Rizz

To understand the compelling nature of slang aesthetics within the architectural discipline is to understand how it fits within our future and its context within the purple-line. "Purple" describes the coexistence of a real environment and one that is virtual (usually in a way revolving around worldbuilding or storytelling). Currently, architecture is only dancing with possibilities of purpleness within the film and fashion industries. A prime example of this is PUMA's most recent parallel fashion shows in NYC and the metaverse.[3]

In PUMA's metaverse fashion show, *Dark Station*, the virtual and physical worlds combine in a sense of storytelling. By three-dimensionally (3D) scanning physical models and placing them in a digital environment, some completely digital, others digital by means of LiDAR (light detection and ranging) scanning of physical spaces, PUMA is curating a story on how their Spring 2023 fashion show was experienced and viewed. Not only are they showcasing new products, but they are also pushing the future of their brand to fit the digital culture of their audience. By choosing to have their first NYC fashion week runway in five years live within this "purple-verse," they were able to grow the brand and stay relevant. By pushing purpleness within architecture, we are choosing to stay relevant to those of our next generation.

With multiple purple traits such as formal trends within *the Thicc*, stylized aesthetics within *the Extra*, and spatial experiences within *the Ratchet*, slang aesthetics has the ability to propel architecture, in its traditional definition, into the purple-verse. By using slang aesthetics to create spaces rooted in storytelling and emotion, we are allowing linguistics to create formalized trends that can exist as purple architecture. In other words, we are able to use slang terminology to create a cheat sheet for generating popularized pieces of trendy architecture.

Using slang aesthetics is a way to upgrade from the traditional architectural types and enhance worldbuilding and/or storytelling of visualized space. These purple qualities are also enhanced themselves through augmented reality (AR), helping architecture bridge the gap from its traditional physical definition to one that fits within the half-real, half-digital purple-verse. In *the Extra*, *the Ratchet*, and *the Thicc* shown previously, interactive AR components create a digital presence that allows the objects within the composition to formally come alive. They allow the viewer, through the use of a phone, to temporarily experience *the Extra*, *the Ratchet*, and *the Thicc* in different ways than they would physically.

Figure 4. A screenshot of what an AR slang aesthetic experience could look like. Alayna Davidson (2019).

Figure 4 demonstrates a screenshot example of how these pop-up venues could be enhanced and experienced differently through the use of digital realities, like AR While similar to the venue's physical appearance, the digital version is completely different in how its reality is perceived. Pieces can move, shift, and change appearance, allowing for the space to change instantly, in the same way a slang term could. With linguistic definitions continually adapting, slang becomes timeless within its temporal presence. Even though the aesthetic and definition may change, the term will always exist. When embedded into architecture, the notion of slang not only allows us to keep up with modern culture but also allows architecture to retain its traditional ability to withstand time and stay relevant.

3 Martin Teo. "The Future is FUTROGRADE, PUMA's Immersive Runway Show at New York Fashion Week," *Lifestyle Asia*, September 15, 2022, https://www.lifestyleasia.com/kl/style/fashion/the-future-is-futrograde-pumas-immersive-runway-show-at-new-york-fashion-week/.

Alayna Davidson

Periodt

Slang aesthetics is a way to use slang and its temporal qualities to create a visual aesthetic that can keep up with popular trends that are constantly changing. Purple qualities with slang aesthetics—a new way of creating architectural form and function through emotion and enhancing storytelling qualities through use of AR—allow architecture to grow, connect, and stay relevant with its future audience. The use of slang and its physical appearance allow us to relate and spark interest within a newer audience. The addition of how the virtual world interacts with its viewer opens up new possibilities that the physical world could not, pushing architecture to not just be held within physical space or digital space but for the two to coexist and even interact. Slang aesthetics can certainly live without the use of a physical reality. But using slang aesthetics with AR enhances purple qualities of physical reality. Increasing the potential of purpleness is what the purple-verse we currently live in is calling for.

A Purple architecture

Design in the Age of the Physical-Virtual Continuum

Bibliography

Teo, Martin. "The Future is FUTROGRADE, PUMA's Immersive Runway Show at New York Fashion Week." *Lifestyle Asia*, September 15, 2022. https://www.lifestyleasia.com/kl/style/fashion/the-future-is-futrograde-pumas-immersive-runway-show-at-new-york-fashion-week/.

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Behnaz Farahi

Showing up in

Spatio-Visual
Regimes
Metavirtual

Post-Screen
Cyborgs

Existential
Scenarios
Human-Human

A Project

Visual Pleasure and the Male Gaze

Robotic Installation for Milan Fashion Week

Has been discussed in essays by

Ryan Scavnicky
Mariana Ibañez & Simon Kim
Ayad Rahmani

Designed by Studio EP
using MidJourney,
DALL.E. 3, and Runway

September 24th, 2023,
11:32 am

Employing the keywords:
[staged], [fashion],
theory, robotics, critical
computation, gaze, bias,
feminism, [on white
background]

Visual Pleasure and the Male Gaze

Robotic Installation for Milan Fashion Week

Behnaz FARAHI

Visual Behavior in Space, Bias, and the Male Gaze

As we gaze out into the world, we actively perceive and make sense of that world. Certain elements draw our attention and hence our gaze, while some remain unnoticeable and stay in our blind spot. As we move in space, we often move where we are looking, and as we speak, we prioritize our gaze to a specific face or point in space. Our gaze changes the value of the world before our eyes by bringing certain elements forward and leaving the rest in the background.

The relationship between attention, direction, and gaze is intuitive. In many cases, our gaze shows our preference. We look at the world through our gaze, make sense of our surrounding environment, and select where we would like to direct our attention. Our gaze shows an object of preference and displays how we pay attention to the outside world.

In social settings, we move and are moved by the gaze of others. In combination with our facial expression and bodily gestures, our gaze contributes to our emotional expressions. According to neuroscientist Jan Lauwereyns, our gaze also creates signals for our social interactions. As Lauwereyns explains, "The effect of the gaze on others, or of the gaze of others on us, can be thought of as a form of emission. The effects involve the emission of signals, the gaze of others contains information that influences us."[1]

Gaze can tell us about social interaction and society more broadly, too. From a study of pattern styles and visual behavior, Andy Clark found a direct connection between social organization and different patterns of visual eye movement.[2] He describes eye movement in relation to pottery styles as a,

> correlation between social complexity and organization at different periods and the different patterns of visual examination that the different styles encouraged. Societies with more hierarchical nesting their civic organization had pottery styles that encouraged more upwards and downwards visual exploration – this was quantified by the eye-trackers as the "vertical index" of different types of pottery.[3]

The organization of power structures in our societies affects our gaze, attention direction, and basically, how we see the world. According to Clark's interpretation of radical entanglement theory, "the core idea is that the built environment—from decorated objects to monuments, buildings, and city-plans—alter not just scan-paths but more fundamentally patterns of attention at every level of neural processing."[4] It is not only visual sensitivity that affects our attention but also our internal and external biases. Lauwereyns explains more about attention: "The actual underlying neural mechanism looks like a prioritization through bias, yet it is labeled 'attention,' at the risk of confusion with the conventional notion, with us since William James. . . that attention improves visual sensitivity."[5] To Lauwereyns' point, it is necessary to include both bias and sensitivity effects in our concept of "attention."

In visual culture, these biases are manifested in gendered ways. In terms of gazes, or ways in which individuals are looked at, art critic John Berger argues that historically men have been portrayed as though they are allowed to examine women, while women must continually watch themselves. As he puts it,

> Men act and women appear. Men look at women. Women watch themselves being looked at. This determines not only most relations between men and women but also the relation of women to themselves. The surveyor of woman in herself is male: the surveyed female. Thus, she turns herself into an object – and most particularly an object of vision: a sight.[6]

Similarly, feminist film theorist Laura Mulvey describes how the male gaze serves to depict women as the object of pleasure for the heterosexual male viewer. It is as though women are under perpetual surveillance from the male gaze. She demonstrates the asymmetry of power relations between the observer and the observed where the unwanted gaze may be experienced as a form of violation. She

Figure 1. *Returning the Gaze*. Behnaz Farahi. Photo by Nick Soland (2022).

1 Jan Lauwereyns, *Brain and Gaze: On the Active Boundaries of Vision* (Cambridge, MA: The MIT Press, 2012), 187.

2 Andy Clark, "Architectures of the Entangled Mind," March 27, 2022, for DigitalFUTURES + FIU DDes/Doctoral Consortium, YouTube video, 2:06:40. https://www.youtube.com/watch?v=O0ggXvICpv8.

3 Ibid.

4 Ibid.

5 Jan Lauwereyns, *Brain and Gaze: On the Active Boundaries of Vision* (Cambridge, MA: The MIT Press, 2012), 198.

6 John Berger, *Ways of Seeing: Based on the BBC Television Series*, 1st ed. (London, UK: Penguin Books, 1990), 20.

explains, "Thus the woman as icon, displayed for the gaze and enjoyment of men, the active controllers of the look, always threatens to evoke the anxiety it originally signified."[7]

The gaze can lead to anxiety, fear, and harassment and can be intrusive. In this context, we could ask whether it might be possible for women to be liberated from the objectification of the male gaze. Might women be able to use technology to return the gaze?

Returning the Gaze Installation

What if women were to subvert objectification and harassment through the power of our gaze? What if we could use technology to extend and amplify our response, especially in an industry long complicit with traditions of female objectification and sexual harassment?[8] Fashion is an important medium for the production of culture, yet in the fashion industry women's bodies are regularly objectified and women have come to absorb this condition unconsciously as a form of the internalized male gaze. What if we were to harness the power of the gaze on the catwalk itself, a venue for various forms of "looked-at-ness"? What uncanny feelings would this evoke? And what strategies of resistance would it promote?

Returning the Gaze is an exploration of this scenario (see Figures 1, 2, and 3). It was a robotic performance installed during the Milan Fashion Week in collaboration with Universal Robots and commissioned by ANИAKIKI. In the center, a female model wears a spacesuit-like outfit and a custom-made headpiece fitted with two tiny cameras. The cameras track and capture the movements of the model's eyes, enlarging and displaying them on four monitors mounted on moving robotic arms glaring back at the observer. The gaze of the model is thereby directed back at the viewer—extended and enhanced through cyborgian technologies. This project brings together robotics, fashion, design, feminism, and critical thinking to critique the asymmetry of social and political power relations between men and women.

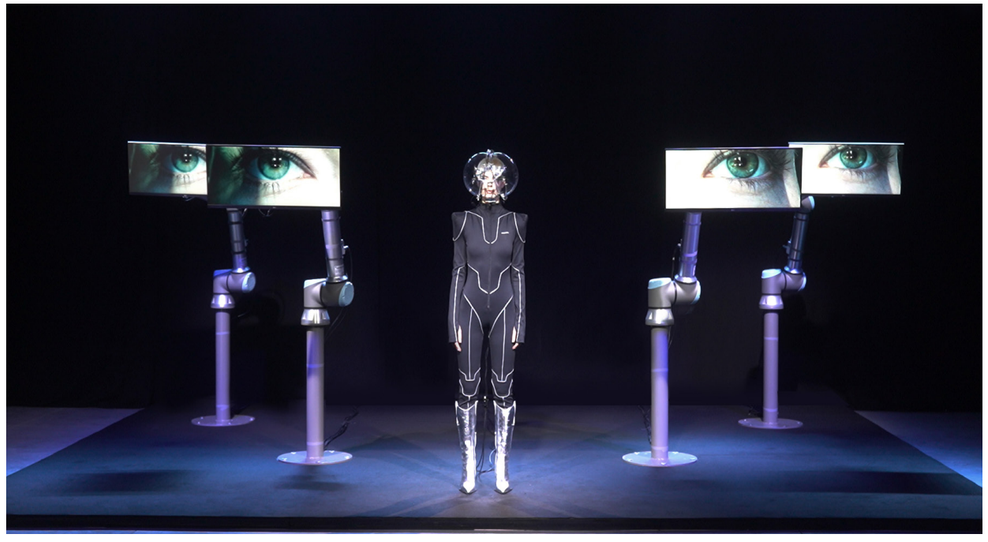

Figure 2. *Returning the Gaze*. Behnaz Farahi. Photo by Nick Soland (2022).

We know from neuroscience that the gaze is its own device: "The gaze is an instrument of social cognition, a communicative device with which we express signals and from which we acquire information—there is sending as well as receiving. From a utilitarian perspective we can ask the practical question of how we use this device most effectively."[9]

In further developing this cyborgian future, decades after Haraway's *Cyborg Manifesto*,[10] we should raise critical questions as to whether technology could be used to empower those who typically have faced injustice and discrimination. This paper argues that technology could engage with culturally and historically sensitive devices and topics, such as the male gaze.

Contextualized in the feminist discourse of the male gaze, the aim of this project is to reflect on ways we could learn to improve our implicit gaze biases in a manner that might be more inclusive and just. An installation in which the gaze of a female model is returned back to the onlookers using robotic arms as an extension of the performer intends to show that those who are historically victimized could be empowered. Furthermore, through the performers' augmented gaze they could force us to reflect on our own, very real biases. *Returning the Gaze* is a step towards a future where our gaze resists disturbing biases, those both explicit and hidden deep in our subconscious.

Figure 3. *Returning the Gaze*. Behnaz Farahi. Photo by Nick Soland (2022).

7 Laura Mulvey, *Visual Pleasure and Narrative Cinema* (Germany: Afterall Books, 2016), 12.

8 Jocelyn Crowley, "Sexual Harassment in Display Work: The Case of the Modeling Industry," *Gender & Society* 35, no. 5 (August 2021): 719–45.

9 Jan Lauwereyns, *Brain and Gaze: On the Active Boundaries of Vision* (Cambridge, MA: The MIT Press, 2012), 215.

10 Donna Haraway, "A Cyborg Manifesto," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991).

Bibliography

Berger, John. *Ways of Seeing: Based on the BBC Television Series*. 1st edition. London, UK: Penguin Books. 1990.
Chalmers, David, and Andy Clark. "The Extended Mind," *Analysis* 58, no. 1 (1998): 7–19.
Clark, Andy. "Architectures of the Entangled Mind." March 27, 2022 for DigitalFUTURES + FIU DDes/Doctoral Consortium, YouTube video, 2:06:40. https://www.youtube.com/watch?v=O0ggXvlCpv8
Clark, Andy. *Natural-Born Cyborgs: Minds, Technologies, and the Future of Human Intelligence*. New York: Oxford University Press, 2004.
Clark, Andy. "Re-Inventing Ourselves: The Plasticity of Embodiment, Sensing, and Mind." *Journal of Medicine and Philosophy* 32, no.3 (2007): 263–82.
Clark, Andy. "Out of our brains." In *The Stone Reader: Modern Philosophy in 133 Arguments*, edited by Peter Catapano and Simon Critchley. New York: Liveright, 2015.
Crowley, Jocelyn. "Sexual Harassment in Display Work: The Case of the Modeling Industry." *Gender & Society* 35, no. 5 (August 2021): 719–45.
Haraway, Donna J. *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge, 1991.
Lauwereyns, Jan. *Brain and the Gaze: On the Active Boundaries of Vision*. Cambridge, MA: The MIT Press, 2012.
Mulvey, Laura. *Visual Pleasure and Narrative Cinema*. Germany: Afterall Books, 1975.

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a purple architecture

Design in the Age of the Physical-Virtual Continuum

Yara Feghali

A Project

Showing up in

[redacted]

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Regimes
Immersive

Post-Screen
Worlds

Existential
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Human-Machine

Inhabiting Indefiniteness

Exploring Virtuality with The Collaborative XR Design Lab

Has been discussed in essays by

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Designed by Studio EP
using MidJourney, and
Runway

September 24th, 2023,
12:46 pm

Employing the keywords:
[set design], [staged],
storytelling, new media,
metaverse, XR, AR, extended
reality, technoculture,
cyberfeminism, simulation,
[on white background]

Inhabiting Indefiniteness

Exploring Virtuality with The Collaborative XR Design Lab

Yara FEGHALI

Technocultural Conditions

The digital world we now inhabit has brought about a new age in which we exist as cyborgs, both human and machine,[1] in multiple virtual realities simultaneously. We occupy different digital spaces through our social media profiles, online games, discussion forums, and extended reality avatars, allowing us to craft our identities in ways that were not possible before. These identities are as varied and numerous as the platforms we use,[2] and the boundaries between our physical and virtual worlds are becoming increasingly blurred. We are living in an era in which technology is constantly evolving and our capabilities for interacting with and inhabiting the digital space are constantly increasing. Since 2020, we have entered a new era of internet technology, coined as Web 3.0 or the Spatial Web, which has drastically changed the way we interact with interfaces, computation, and data.[3] With this new internet, our digital experiences have become immersive and varied, and our identities are no longer limited to our physical selves. We now have the capacity to actively participate and inhabit multiple virtual worlds simultaneously. We no longer exist in a world of physical/virtual binaries but instead reside in a "technocultural"[4] society that embraces pluralism and indefiniteness. It is within the intersection and misalignment of these multiple realities that the most productive and remarkable fissures, or purple conditions, emerge. These fissures are in-between[5] conditions resulting from messy overlaps of our online and offline realities. Through the Collaborative XR Design Lab (The Collab XR DL) we can explore how immersion is impacted by the scope, size, and speed of these fissures (see Figure 1). We analyze the user experience of interacting and being immersed inside this virtual world by questioning the implications of this digital breach. How wide do the fissures have to be to break the immersion? How small of a difference is needed to generate a fissure? How quickly can a breach be stitched back together? What are the benefits of a messy overlap?

Figure 1. Screenshot in-game of *The Collaborative XR Design Lab ~ The Island*, Spatial Web Folly Feast Lab and designed with UCLA AUD M.Arch and MSAUD students (2022).

The Collab XR DL is an innovative virtual world developed by Folly Feast Lab. The Collab XR DL is a framework for building immersive virtual social spaces for interaction and collaborative design. It is a digital simulation game built for the Spatial Web where players can collaboratively build, design, discuss, and play together in real-time using virtual reality (VR) head-mounted displays (HMD). This platform turns users into designers and architects of its public spaces, beaches, markets, and residential neighborhoods who need to design the city collaboratively and playfully. In ~ *The Island*, an episode of The Collab XR DL, the virtual city is on an island. The episode was developed for a technology seminar taught at the University of California, Los Angeles, in the Architecture and Urban Design department. Thirty-two students[6] became the virtual designers and architects of that island. To explore the virtual

1 "We are all cyborg" refers to Donna Haraway's 1991 "A Cyborg Manifesto." Haraway argues that everything we use today is the result of an invention of a certain machine; we are cyborg because the shirt we wear is made possible through a factory using a series of machines. Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century" in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), 149–81. In a 1997 interview in *WIRED Magazine*, Haraway extends her argument, saying, "Technology is not neutral. We're inside of what we make, and it's inside of us. We're living in a world of connections – and it matters which ones get made and unmade." Hari Kunzru, "You are cyborg: Interview with Donna Haraway," *WIRED Magazine* 5, no. 2 (1997): 1–7, https://www.wired.com/1997/02/ffharaway/.

2 The multiplicity of identities emerging from our online presence is at the heart of Legacy Russell's writing about the work of Black queer artists. Russell argues that we all contain multitudes of identities, and that multiplicity is a feminist act. Legacy Russell, *Glitch Feminism: A Manifesto* (London: Verso Books, 2020).

3 In reference to the Web 3.0 diagram by Gabriel René and Dan Mapes, *The Spatial Web: How Web 3.0 Will Connect Humans, Machines, and AI to Transform the World* (United States: Gabriel René, 2019), 89.

4 Technocultural is an academic term used to describe the politics and relationship of technology to culture. Constance Penley and Andrew Ross, *Technoculture* (Minneapolis, MN: University of Minnesota Press, 1991).

5 In-between here refers to writings by the Cyberfeminist German artist Cornelia Sollfrank about the various attitudes and theories of the internet, cyberspace, and new media technologies. Sollfranck says, "Cyberfeminism does not express itself in single, individual approaches, but in the differences and spaces in-between." Cornelia Sollfrank, "The Truth about Cyberfeminism," *Writings*, OBN, accessed June 9, 2023, https://obn.org/obn/inhalt_index.html.

6 The Collaborative XR Design Lab ~ The Island was taught by Yara Feghali in Spring 2022 as a Technology Seminar for the following students of the M.Arch Professional Degree and M.S. in Architecture and Urban programs at the University of California, Los Angeles, in the Department of Architecture and Urban Design (UCLA AUD M.Arch and MSAUD): Marina Archangeli, Krishna Barot, Xiting Chen, Yueh-Hui Chen, Muyan Duan, Jingjing Fang, Miranda Hirujo-Rincon, Ziwei Hou, Yuhao Jia, Haowen Jiang, Ziyao Jiang, Kamila Khusnetdinova, Chih-Ping Liu, Qiuying Lu, Angelica Luna, Siyu Mao, Motomi Matsubara, Eduardo Morian, Insia Motiwala, Indulekha Nair, Rui Qiu, Yitong Qu, Yatian Ren, Abtin Shahverdi, Kaibo Wang, Yuzhou Wang,

world of The Collab XR DL ~ *The Island*, we will analyze the experience of a fictional student called Nura by describing her simultaneous movements and experience in both virtual and physical worlds. We are looking for fissures that define the scope of the breach from one world to the other on the scale from weakly to highly immersive. These fissures exist on a spectrum of purpleness (see Figure 2).

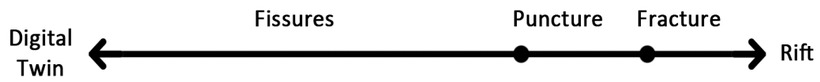

Figure 2. Breaching scope diagram: from a digital twin alignment to a small fissure, to a puncture, a large fracture, and finally a rift at the other end of the spectrum. Yara Feghali (2022).

Setting up the HMD – The Digital Twin
Nura steps into a 10'x10' physical room, her VR Lab, and puts on her Oculus Quest 2 HMD. With her controllers, she defines the ground level in the virtual world by drawing a virtual boundary around her, called a guardian, that indicates the physical space limit in VR and helps prevent Nura from hitting things around in the VR Lab. The ground and the guardian are seamlessly linked, creating a digital twin of the physical space's limit. A digital twin is a virtual representation of an existing physical object—it serves as a replica. This first step helps Nura to easily become immersed in the virtual world since she does not need to worry about her physical environment anymore. At this point, there is no fissure yet; she is ready to be transported onto the island.

Entering the Game – A Slight Fissure
Nura is transported into the VR world. A pop-up interface appears, prompting her to choose an avatar category among Traders, Dwellers, Explorers, and Farmers. She selects the Traders and is directly spawned into the Traders' neighborhood. Her controllers render as yellow cartoon hands, and she can see the sombrero decorated with hanging fruit on her avatar. The virtual space around her is vast and sunny: she is on a beach, and there is a pink fog in the distance. Nearby is a floating market selling fruitand a bazaar. Though her avatar's hands seamlessly follow her hand movements, they look cartoonish. Thus, while she embodies her avatar, she is constantly reminded through her cartoon hands that she is inside a virtual world. This reminder creates a slight fissure between the physical and virtual realms, the first instance of leakage between the physical and the digital. The subtle divide between her identity and her avatar reinforces that she is now a part of two worlds, with the fissure between them not large enough to separate them completely. Nura, in this moment, is a student in a VR Lab and a Trader tasked with building and designing the Traders' neighborhood on The Collab XR DL island—she contains multitudes.[7] This dual condition allows for a "new aesthetic" to emerge.[8] Defined in 2012, the concept explores how technology is influencing the way we consume aesthetics, media, and art. Nura is experiencing this new aesthetic condition by containing multiple identities (see Figure 3).

Figure 3. Screenshot in-game of *The Collaborative XR Design Lab ~ The Island*, Spatial Web by Folly Feast Lab and designed with UCLA AUD M.Arch and MSAUD students (2022).

Building Collaboratively: Another Fissure

Nura notices that her virtual backpack is filled with items she can place in the world; this asset pack is specific to the Traders. She can place, scale, edit colors, and rotate the items, and some are brushes she can use to draw in 3D space. The assets include a Bitcoin ATM, a small wooden boat with fruit, some fish, bazaar stands, stools, merchandise, jewelry, and barrels. She places a few of these and scales them in place. Other avatars that were walking around her start to inhabit the assets and play with the items she placed in the world. Nura notices that there are four types of Traders, and one of them looks just like hers. There are also many Dwellers, Farmers, and Explorers around her. Together they continue to place assets, draw, build, and design virtual space collaboratively. Even though they all inhabit different bodies, the fissure of the misalignment of physical and virtual does not break the immersion because they are all using their bodies' movement and controlling the way they build and draw together. This fissure is similar to the first one but multiplied by the number of avatars in the space.

Social Chat: A Little Puncture

While she starts talking with avatars around her, Nura recognizes her colleagues' voices. She and her

Hongye Wu, Muxi Yang, Yang Yang, Yuning Yang, Yiran Ye, and Yuqian Zhang.

7 Legacy Russell, *Glitch Feminism: A Manifesto* (London: Verso Books, 2020).

8 As defined by James Bridle, and popularized after his panel with the same name at South by Southwest in 2012, the concept of "new aesthetic" refers to the aesthetics of the virtual leaking into the physical world, and the aesthetic of the physical leaking into the virtual world, blurring the boundaries between them. James Bridle, "#sxaesthetic," *BookTwo* (blog), March 15, 2012, http://booktwo.org/notebook/sxaesthetic/.

colleagues are all immersed in the simulation on the virtual island, even though they are physically all in different spaces. It takes her time to match the voice to the avatar's body since she must simultaneously imagine her colleagues' identities and their embodied avatar. The misalignment between their bodies and voices makes this situation a puncture between physical and digital realities. Nura, in this moment, is designing a market with the help of two other Traders' avatars, while the avatars of other Dwellers, Farmers, and Explorers are walking and talking around them. At the same time, she is having discussions about the design of the market and about their social life outside of the virtual world. The same goes for all the other avatars on other sides of the island building collaborative housing, farms, and public spaces. All these realities exist simultaneously with each student's physical surroundings and social life. This messy overlap is comparable to the novel *The City and The City*,[9] in which Miéville's twin cities of Beszél and Ul Qoma exist in the same geographical space but inhabit distinct realities. Maybe from that dual point of view, the novel is a speculation on the future of inhabiting multiple distinctive identities through technology. The previous fissures from entering the game and building collaboratively get enlarged and become a puncture—a different shade of purple—where pluralism and indefiniteness thrive.

Exploring Other Neighborhoods: The Undeniable Fracture

The island is vast, and Nura decides to explore beyond her neighborhood. She teleports across the landscape towards the Explorers', Dwellers', and Farmers' corners. That quick motion through space reminds her that she is in a simulated virtual world. Even though she is inside her VR, there is a fracture; her virtual body takes over her physical one and transports her at speeds that would not be possible in her physical VR lab. Teleportation is an undeniable fracture in the simulation and is closer to the rift part of the breaching spectrum.

Breaching the Guardian: The Wide Rift

As Nura is drawing and building in VR, she approaches her VR guardian and is suddenly thrown out of the simulation. All she sees now is her VR Lab in black and white through the HMD cameras. It is a safety feature that stops all simulations to make her aware of her physical body and environment. This shift of spaces is a rift in immersion and stands highest on the breaching spectrum. Nura quickly steps back into her guardian boundary and is projected back into the virtual world and forgets ever having breached the simulation. The more often Nura uses VR, the less wide that rift becomes and the easier it is to jump back into VR Her transition from her physical reality and identity to her virtual spaces and multiple identities only becomes quicker with time (see Figure 4). Since the simulation is so realistic, our embodiment of our online identities and lives could be an ethical and political concern. According to Chambers, writing in *Reality+*,[10] for our brain there is no difference between physical and virtual experiences. *Reality+* urges us to consider the ethics and politics of virtual worlds and to extend our rules, regulations, and values into those virtual worlds. This point of view might be too radical considering where the technology is today in terms of software, hardware, and accessibility, but it is a potentially interesting future to consider.

9 Miéville's worldbuilding for this novel remarkably defines two cities that are copies of each other, but only half of the citizens see one side. The other half see the second side. Miéville develops fascinating vocabulary around "unseeing" and "breaching" in-between these two cities. The reader discovers later in the novel that there is a third city that exists with these two cities. I use this example because of its clear resemblance to simulation and multiple worlds co-existing. China Miéville, *The City & The City*, (London: Macmillian, 2009).

10 David John Chalmers, *Reality+: Virtual Worlds and the Problems of Philosophy* (New York: W. W. Norton & Company, 2022).

Figure 4. Screenshot in-game of *The Collaborative XR Design Lab ~ The Island*, Spatial Web by Folly Feast Lab and designed with UCLA AUD M.Arch and MSAUD students (2022).

Blurred Boundaries

Fissures create a condition of in-betweenness; they allow for the multiple to exist simultaneously. Through the fissures, various identities and numerous worlds collide. The boundaries between these worlds are revealed as blurred. Nura, in this case, comfortably inhabits that indefiniteness—she dwells within the new aesthetic (see Figure 5). If previous representations of virtual worlds in popular culture had a clear divide where Nura would have had to choose between one world or the other—like in the sister Wachowskis' film *The Matrix* (1999)[11] where the protagonist, Neo (played by Keanu Reeves), must choose between the blue or the red pill—today's world offers a third option, an in-between purple state. Nura still sees both worlds and can easily navigate in between them, a bit like Neo in the end of the movie, when he can move freely between both worlds, understanding that they are both simulations. Similarly, in the *The City and The City*,[12] inspector Tyador Borlú discovers Orciny, a third city that exists in-between and simultaneously with Beszél and Ul Qoma, the other two—they all overlap and coexist. The novel dives into the politics and ethics of the cohabitation of cities that are extensions of each other. Nura will continue to inhabit virtual worlds and to embody multiple online identities. She will forever contain multitudes and swim comfortably in indefiniteness while embracing the ambiguity of messy overlaps. Though it is exciting to consider the potential for social VR to bring about an entirely

11 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

12 China Miéville, *The City & The City*, (London: Macmillian, 2009).

immersive and embodied experience, it is imperative to remember that these VR platforms are owned by companies, and the creation of virtual worlds relies on data stored on their servers. In our technocultural society, with its ever-increasing reliance on technology, and our online and virtual identities becoming inseparable from these technologies and platforms, we should strive towards a decentralized structure and use blockchain technology to regain control of our data. This should be our goal.

Figure 5. Screenshot in-game of *The Collaborative XR Design Lab ~ The Island*, Spatial Web by Folly Feast Lab and designed with UCLA AUD M.Arch and MSAUD students (2022).

Bibliography

Bridle, James. "#sxaesthetic." *Booktwo.org* (blog), March 15, 2012. http://booktwo.org/notebook/sxaesthetic/.

Chalmers, David John. *Reality+: Virtual Worlds and the Problems of Philosophy*. New York: W. W. Norton & Company, 2022.

Haraway, Donna. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century." In *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge, 1991.

Kunzru, Hari. "You are cyborg: Interview with Donna Haraway." *WIRED Magazine* 5, no. 2 (1997): 1–7. https://www.wired.com/1997/02/ffharaway/.

Miéville, China. *The City & The City*. London: Macmillian, 2009.

Penley, Constance, and Andrew Ross. *Technoculture*. Minneapolis, MN: University of Minnesota Press, 1991.

René, Gabriel, and Dan Mapes. *The Spatial Web: How Web 3.0 Will Connect Humans, Machines, and AI to Transform the World*. United States: Gabriel René, 2019.

Russell, Legacy. *Glitch Feminism: A Manifesto*. London: Verso Books, 2020.

Sollfrank, Cornelia. "The Truth about Cyberfeminism." *Writings*. OBN, accessed June 9, 2023. https://obn.org/obn/inhalt_index.html.

Wachowski, Lana, and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.

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If you are reading the ***Post-Screen*** book, please go to page **58**

If you are reading the ***Existential Scenarios*** book, please go to page **76**

Nate Hume

A Project

Showing up in [redacted]

Spatio-Visual Regimes
Spatial

Post-Screen Systems

Existential Scenarios
Human-Nature

Material Undecidability

Exploring the Stuffed Crust

Has been discussed in essays by

Dora Epstein Jones
Janice Shimizu
Martin Summers

Designed by Studio EP using MidJourney, and Runway

September 24th, 2023, 03:46 pm

Employing the keywords: [staged], [set design], materiality, textures, atmospheric spaces, nature, artificial exaggerations, construction, isolated, [on white background], [blank background]

Material Undecidability

Exploring the Stuffed Crust

Nate HUME

Poles Turning Purple

Conditions of purpleness abound in contemporary culture and architectural discourse. Clear divisions and dichotomies give way to hybrids and newly formed registers resisting easy sorting. Poles, once useful or not, defined ways of arguing and working along positions as much as oppositions. In a purple mode, a more ambiguous and potentially productive space opens up through equal friction and assimilation of these former oppositions. This piece concerns itself with purple materials that resist binary classification and form spatial and physical effects which themselves form a likewise purple atmospheric, spatial experience. To understand these purple conditions, it is helpful to chart the recent trajectory and shifting poles instigating their development.

Several years ago, the prevailing preoccupation in architecture with pursuing the design of the alien and unknown, prompted largely by the adoption of computation into the field, hit a point of exhaustion. The pursuit of novelty slowly gave way to a series of "returns" as the work faced resistance and a call for a disciplinary reset. The familiar resurged with a vengeance, establishing a swing from excessive exuberance to the self-described simple, boring, and noninteresting. The tension between the threat of the never before seen and the comforting assurance of the known formed clear counterpoints. As these oppositions drove further and further from each other, a set of interests and projects developed that dodged the clear binary, choosing instead to embrace notions including the almost familiar, ambiguous, indifferent, and ambivalent. These pursuits occupied a space between a nostalgic retreat and a further futuristic spiral. This purple territory emerging between the poles created room for many aspects of architecture to return to the fray that were largely absent during the preceding debates. One of these topics was that of material, which had been sidelined by everything from the influence of the linguistic turn to the developed allergy to phenomenology and the early virtual working environment.

Material Lost and Regained

During the initial wave of digital exploration, material consequences were largely ignored. Digital images appeared material-less, and many fabrication strategies favored attempts at replicating the cold sleekness of the virtual world. Inhabiting the rendering seemed in part a resistance to previous theoretical pursuits but also in line with the frenzied pursuit of novelty. The work advocated against using the traditional materials of construction, with representation embracing shaders over material, blinns and occlusion instead of masonry or timber. The outputs of fiberglass or printed plastic acted as stand-ins for the unnamed rendered materials. Eventually, as the work moved beyond monochromatic white or the shiny colored plastic favored by the software, material strategies began to drift in from popular culture and the art world. These largely embraced faux materiality and texture mapping. Over time, techniques mining images as material have become ubiquitous and can be described by Matt Jones' *Sensor Vernacular,* which he defines as "an aesthetic born of the grain of seeing/computation. Of computer-vision, of 3d-printing; of optimized, algorithmic sensor sweeps and compression artifacts. Of LiDAR and laser-speckle. Of the gaze of another nature on ours."[1] Jones discusses these artifacts accumulated "in the loop of 3d-scanning to 3d-printing to 3d-scanning to 3d-printing" as shifting the technology to "a working material."[2] Pixels, tessellation, topology, and glitches constituted an updated material palette. A palette born out of expanded global communication, surveillance technology, and new production processes formed a wild and unknown digital realm of material that slowly became as recognizable as the familiar material palette it had replaced (see Figure 1).

Figure 1. *Stuffed Crust:* Closeup exterior looking into growing spaces. Hume Architecture (2022).

1 Matt Jones, "Sensor Vernacular," *BERG*, May 13, 2011, http://berglondon.com/blog/2011/05/13/sensor-vernacular/.

2 Ibid.

236
290
306

Familiar Becomes Strange

The styles of unknown "weirdness" drifting in these new aesthetic possibilities, such as vaporwave, eventually became everyday visuals, causing the register of what was ordinary and spectacular to shift. One material counterpoint to these new aesthetic conditions, according to James Bridle, is a movement chasing "carefully authentic bits of restrained artisanal fashion. . . . Every new coffee shop and organic foodery seems to be the same. Wood, brushed metal, bits of knackered toys on shelves. And blackboards everywhere."[3] A return to this rugged palette of "raw" materials produced a natural or analog aesthetic to eschew the virtual for the physical. The divide set up by the competing digital and artisanal aesthetics provides a point of tension to work through in the pursuit of purple conditions of material undecidability. These conditions develop through materials being informed by digital processes and contemporary culture while also retaining properties and associations from known building materials and history (see Figure 2).

Figure 2. *Stuffed Crust:* Exterior view. Hume Architecture (2022).

The reembrace of traditional construction materials and rough matter over flatness of surfaces brought a return to other fundamental architectural interests out of vogue, including the impact of tectonics and texture on space, the seamless and smooth challenged by the rusticated and assembled. Although these known materials offer more practical avenues for construction and ties to the history of the discipline, it is not quite Louis Kahn asking a brick what it wants to be. Rather, it's understanding a material like clay today with expanded geometric, structural, textural, and chromatic possibilities. The advances in material production, which include casting processes, Computer Numeric Control (CNC) forming and cutting, pigment dyeing, material composition, and finishing, allow for simple materials to take on many complex qualities and assemblies. The divide between virtual and natural materiality has become far more nuanced and confused. The use of digital processes to embed images into materials through printing and casting or analog techniques of marbling, dipping, or mixing, which approximate digital artifacts, form a contemporary purple material sensibility flickering between states. These synthetic materials elicit experiences through which people can recalibrate their understanding of their environment; the associations between material, texture, and makeup become questioned and produce heightened purple atmospheric experiences.

Deep Purple

Recent work at Hume Architecture has developed purple assemblies oscillating between familiar material elements and components treated, formed, and presented in unfamiliar manners. Running through all the work exists an investigation of using materials and their textures to create densely saturated atmospheric spaces. The chromatic and textural treatment or exaggerated qualities of materials such as timber, cast concrete, or metal siding allow them to become extranatural. The materials appear to be in a dynamic state of shift, whether it be through color or buildup of grains and patina. Materials unfurl, peel, and thicken to produce densely layered spaces. The depth of these textures produces the character of these spaces and influences the perception of construction. Throughout the works, the natural materials take on uncanny appearances of being more natural through artificial exaggerations. The layering of the vegetative and the constructed occurs across the work, developing a purple sensibility that eschews traditional divisions (see Figure 3).

Figure 3. *Stuffed Crust:* Interior view showing growing spaces alongside living area. Hume Architecture (2022).

In projects such as *Stuffed Crust*, the materials don't stack or join cleanly but instead destabilize a single reading by forming patchy instances and a myriad of details confusing their relationships. These material assemblies seem to build up, tumble, and delaminate elements to form spaces that can be perceived as shifting from being contained interiors to expanded exteriors. The thickness of material once again is challenged as deep volumes give way to seemingly thin veneers and chunky structure peels and tilts. In this small house, the traditional backyard vegetable garden becomes embedded within the structural system. In contrast to massive sites of indoor farming that have been emphasized as food sources becoming more compromised and precarious, here the farming is at the scale of the house and its occupants. For example, a Lo-Fi aeroponic system that can produce key elements for a healthy and sustainable diet becomes the lining of the house. This looped system from water collection, to growing, to harvesting occurs in the wall and forms a thickened kitchen zone. With equipment being absorbed into the wall cavity and a garden extending outside as well as vertically through the house,

3 James Bridle, "#sxaesthetic," *BookTwo* (blog), March 15, 2012, http://booktwo.org/notebook/sxaesthetic/.

the garden becomes a spatial organizer rather than a static backyard component. The plants produce an atmosphere full of living matter, and their colors and smells extend throughout the structure. The shingled panels expand this textural and haptic experience by building up and appearing to grow on top of each other, while allowing plants to peek through and exaggerate their depth. Vivid textures and colors heighten the atmosphere to form a space full of known materials but full of misregistration in their buildup and organization (see Figure 4).

Figure 4. *Stuffed Crust:* Section. Hume Architecture (2022).

By using materials to produce different understandings of composition and spatial perception through blurring qualities of the natural and artificial, these paradoxical purple combinations serve to open up new opportunities within architecture. The use of these extranatural material assemblies produces optical effects influencing space and perceived thickness. Materials can reformulate relations of structure and depth through their composition effects and organization. In doing so, synthetic materials and assemblies can transcend mere codification of building elements to create new conceptions of space and what composes it. To do this the materials forge loose relationships with the building's form, at times conforming and reinforcing the underlying geometry, and at other times, delaminating to create spatial gaps and additional features. Grains, hatches, edges, and pattern no longer need to be subservient to the boundaries of the building elements but can skip across joints, break forms down into other parts, and create optical interference that changes perception of depth and tectonics. It is in these moments that the materials contribute to the conception of space rather than just acting as additive decoration mapped to the form. The buildup and edging of materials abandon conventional relationships to create unexpected moments of patches revealing themselves or additional layers embedded and growing underneath. Materials that appear thick and massive are revealed to be sharply thin as one passes through the boundary of openings, while others that appear light become detailed to form thickened threshold conditions. Materials, both living and non, take on an exaggerated thickness and thinness allowing them to form a dialogue with the building rather than just sitting atop it as applique. Masonry becomes thin veneer, vegetables accumulate into massive poché, while paint forms dense frosting hanging from a facade. These differing depths, some real and some implied, form new attitudes about layering and composing materials. These strategies form new spatial experiences while borrowing equally from Renaissance rustication and the era of virtual mapping and texturing (see Figure 5).

Figure 5. *Stuffed Crust:* Ground floor plan. Hume Architecture (2022).

Purple material as a point of interest offers means to influence culture's understanding of matter and space while also producing new experiences and worlds. Perceptions of what constitutes the real versus the virtual are disturbed as is comprehension of what the use of these resources and the shift to their synthetic replacements means for the culture at large. These purple spaces embrace the possibilities of the built environment by leveraging possibilities afforded by advances in production and technology while also utilizing the power of long-standing understandings people have of building materials. The renewed engagement does not need to be a retreat to but rather a move sideways from the poles of nonmaterial imagery or material nostalgia.

Bibliography

Bridle, James. "#sxaesthetic." *Booktwo.org* (blog), March 15, 2012. http://booktwo.org/notebook/sxaesthetic/.

Jones, Matt. "Sensor Vernacular." BERG. May 13, 2011. http://berglondon.com/blog/2011/05/13/sensor-vernacular/.

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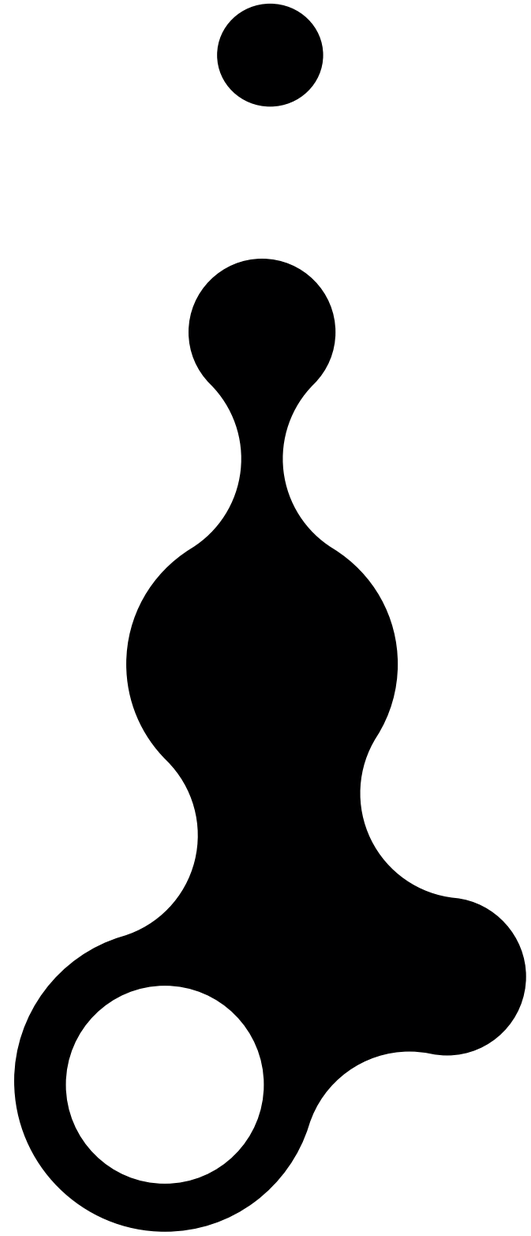
A Purple Architecture

Design in the Age of the Physical-Virtual Continuum



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Damjan Jovanovic &
Lidija Kljakovic

A Project

Showing up in

[redacted]

Spatio-Visual
Regimes
Immersive

Post-Screen
Worlds

Existential
Scenarios
Human-Machine

The Cloud Garden

Simulation as an Emergent Format

Designed by Studio EP
using MidJourney, and
Runway

September 24th, 2023,
07:31 pm

Employing the keywords:
[staged], [set design],
video game, simulations,
virtual, VR, AI, non-human,
website, VR, [on white
background]

Has been discussed in essays by

Stephen Caffey
Natasha Sandmeier
Marjan Colletti

The Cloud Garden

Simulation as an Emergent Format

Damjan JOVANOVIC and Lidija KLJAKOVIC

Infinite Games

Real-time simulations are an emerging format for architectural modeling. Going beyond drawing, mapping, and diagramming, this format allows for the coexistence of continuous scales within the same model space; produces a dynamic, real-time interaction with the onlooker; and potentially raises novel disciplinary questions on the nature of models and modeling.

In contemporary culture, simulations are present mostly through the medium of video games, which are defined by their ability to offer an interactive, playable, immersive experience of a fully modeled virtual space at any scale—from the apartment block of *The Sims*[1] to entire universes in games like *No Man's Sky*[2] or *Stellaris*.[3] In recent discussions (see Federico Campagna's[4] podcast episode on the work of Stefano Gualeni[5]), games are seen as a unique way of exploring and participating in a practice of multiscalar modeling of internally coherent Worlds. Simply put, games are great at producing ever-novel and ever-more-complex, fully self-contained model worlds that can be interacted with. The practice of making interactive, fully modeled virtual space at multiple scales goes by different but related titles: Worlding, Worldbuilding, Worldmaking. All point in the same general direction and expose the fact that we, as a culture of design, need a new vocabulary when talking about design on such scales and resolution.

At the same time, simulations are entering the art world as a new format of storytelling and expression. Ian Cheng's recent series of simulations, *Emissaries*,[6] explores the concept of "Worlding,"[7] which the artist defines as "the unnatural art of creating an infinite game by choosing a present, storytelling its past, simulating its futures, and nurturing its changes."[8] The concept of an "infinite game" comes from James P. Carse[9] and offers a window into some of the ideological motivations behind Cheng's work. Working with simulations privileges an open-ended structure and presupposes a non-deterministic universe, as a liberation from fixed and finite models of thinking and making. Indeed, Cheng's work consists of a series of self-playing, open-ended simulations of a world imbued with characters and objects. Cheng models the world as a static tableau, introduces the objects and characters into it, and then uses GOFAI (Good Old-Fashioned Artificial Intelligence) models, such as behavior trees, to run decision-making for characters within the world. In this way, Cheng is able to test the boundaries of storytelling and meaning-making by deploying a nonlinear, unpredictable narrative structure of a model world from within. Cheng's notion of Worlding represents in many ways a narrative paradigm that hybridizes cinema (animation) and games, where the traditional narrative structures are put in friction and adversarial relation with the open-endedness and the chaotic beauty of a simulation. The classical tropes of storytelling that have always governed how we understand and assign meaning are incapable of regulating the chaos of a simulation. The incapacity breaks our own attentional structure and invites us to develop new rules of engagement. By making a video game that plays itself, Cheng marks the arrival of the simulation as part of the "official" culture.

Simulations also enable a new way of seeing, evident when we compare film and games. In a game called *Everything*,[10] artist David O'Reilly has produced a contemporary version of the famous film by Ray and Charles Eames, *Powers of Ten* (1977).[11] The game presents an entire universe of things: objects, characters, animals, trees, rocks, buildings, islands, planets, cells, molecules, galaxies, and many more—all of which can be taken over and controlled by the player, in an act of continuous engagement and seeing through the virtual camera. By comparison, in the *Powers of Ten*, the camera was able only to zoom in and out, no doubt influenced by the available technical modes of seeing at the time (i.e., the microscope and telescope, respectively). In *Everything* the camera is completely fluid, moving in any direction and switching laterally between scales of things, zooming indefinitely in a kind of a dance of endless access, absolute continuous vision. In *Everything*, as in many other contemporary games,[12] the notion of montage, understood as the bringing together of separate Worlds into the same frame of vision, is completely absent and replaced with the continuous movement of a dynamic camera within the frame. This is a fundamentally different, software-based technical way of seeing, which is only possible in a video game or, we could say, through the format of a simulation. This is how simulations make available a true multitude of access points to a designed World, by fostering "an ecology of seeing," which is the main point of entry into their significance for architectural design.

Beyond Drawing

A simulation is an interactive, nonlinear visual and narrative format that can change and evolve through time and have potentially endless, different outcomes. What do simulations mean for architectural design?

1 *The Sims*, developed by Maxis, is a life simulation video game.

2 *No Man's Sky*, developed by Hello Games, is a survival video game where players explore an infinite galaxy.

3 *Stellaris*, developed by Paradox Development Studio, is a strategy video game.

4 Federico Campagna, "Stefano Gualeni, "Virtual Worlds as Philosophical Tools", December 10, 2020, in *Overmorrow's Library*, presented by The Centre d'Art Contemporain Genève, podcast, 23:14, https://overmorrows-library.simplecast.com/episodes/episode-6-stefano-gualeni-virtual-worlds-as-philosophical-tools.

5 Stefano Gualeni, *Virtual Worlds as Philosophical Tools: How to Philosophize with a Digital Hammer* (Basingstoke, UK: Palgrave Macmillan, 2015).

6 Ian Cheng and Nora Khan, *Emissaries Guide to Worlding: How to Navigate the Unnatural Art of Creating an Infinite Game by Choosing a Present, Storytelling Its Past, Simulating Its Futures, and Nurturing Its Changes* (Germany: Serpentine Galleries, 2018).

7 Ian Cheng, "Wordling Raga 2: What is a World?" *Ribbon Farm* (blog), March 5, 2019, https://www.ribbonfarm.com/2019/03/05/worlding-raga-2-what-is-a-world/.

8 Ian Cheng and Nora Khan, *Emissaries Guide to Worlding: How to Navigate the Unnatural Art of Creating an Infinite Game by Choosing a Present, Storytelling Its Past, Simulating Its Futures, and Nurturing Its Changes* (Germany: Serpentine Galleries, 2018).

9 James P. Carse, *Finite and Infinite Games* (Washington, D.C.: Free Press, 2013).

10 *Everything*, developed by artist David O'Reilly, is a simulation video game.

11 *Powers of Ten*, directed by Charles Eames and Ray Eames (Eames Office, 1977).

12 See, for example, Galloway's reading of Nintendo's *Metroid Prime*. Alexander R. Galloway, *Gaming: Essays on Algorithmic Culture* (Minneapolis, MN: University of Minnesota Press, 2006).

Architectural design as a process of modeling is dominated by a monoculture of seeing, which we call the orthographic sequence. This monoculture promotes a highly specific, detached, and quasi-objective mode of looking at a World of the architectural project, with only a few, highly controlled access points. (A plan is a totally curated image/model, where the access to the underlying space presents an extreme form of control.) This architectural monoculture is itself an outgrowth of what Martin Jay would call "the dominant scopic regime of Cartesian Perspectivalism."[13] Since simulations are deploying virtual cameras, which trace their lineage to perspectival construction, it could be argued that the true innovation of the format is in its types of movement and dynamic access. Such movement and access blow up abstraction and push designers to think in full-resolution immersive models, instead of thinking in plans and sections. This is why working with simulations could be considered a radical practice—the language of abstraction that is so tied with the current monoculture of seeing is rendered powerless when faced with the infinitely deep and wide space of the simulation.

The work of Lifeforms.io explores the simulation as a design format, and the studio works exclusively through interactive, playable models. An interactive model can be seen as a new representational format produced through the use of real-time rendering. In this way, we can understand the format of the simulation as a collapse of two previously separate formats of architectural representation: the image and the model. In the same way in which, as Lev Manovich would argue, all historic mediums have become collapsed into software,[14] architectural design mediums get collapsed into the simulation. In recent years, a number of authors have grappled with the problem of defining what kind of an artifact is produced through digital techniques, with very different conclusions. As my contribution to this debate, I would like to propose the simulation as the right format for understanding digital artifacts in architectural design. Consequently, in the simulation, the act of modeling can be collapsed with the act of rendering, producing a hybrid idea of work, one that combines previously separate notions of production and post-production. An example of this can be seen in *The Cloud Garden*, a recent project that the Lifeforms.io studio completed (see Figure 1).

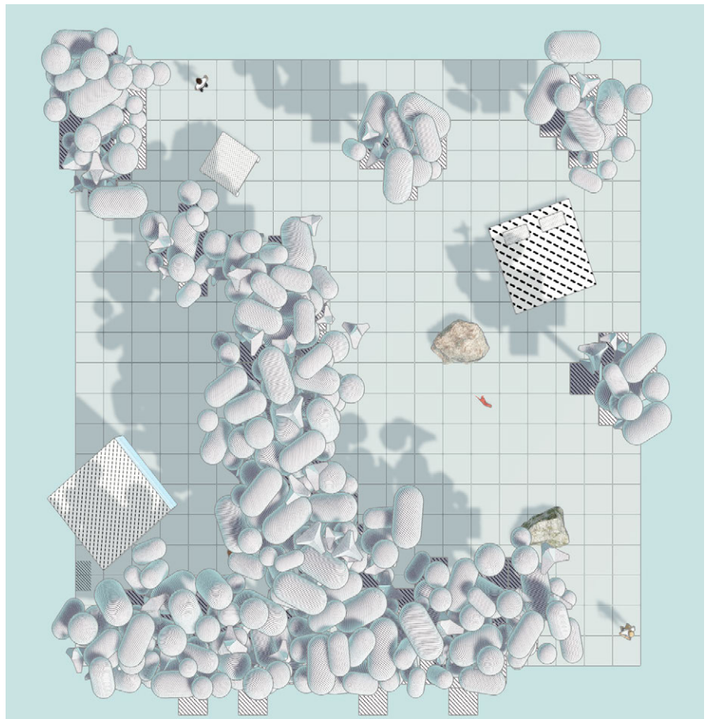


Figure 1. *The Cloud Garden*. Lifeforms.io (2021).

The Cloud Garden

The Cloud Garden is an architectural story presented through the medium of a playable simulation, or video game (see Figure 2). The game is open-ended; there is no fixed goal or "end state." The story centers on an interplay between two human and two nonhuman characters, which are controlled by artificial intelligence (AI), and are watched over by the ever-present eye and hand of the player, who initially takes the role of the observer (see Figure 3). When the game is started, the characters perform a kind of scripted but open-ended choreography that is designed with the use of behavior trees and AI, while the player discovers the ability to intervene directly within the small world, taking the role of the designer (see Figure 4).

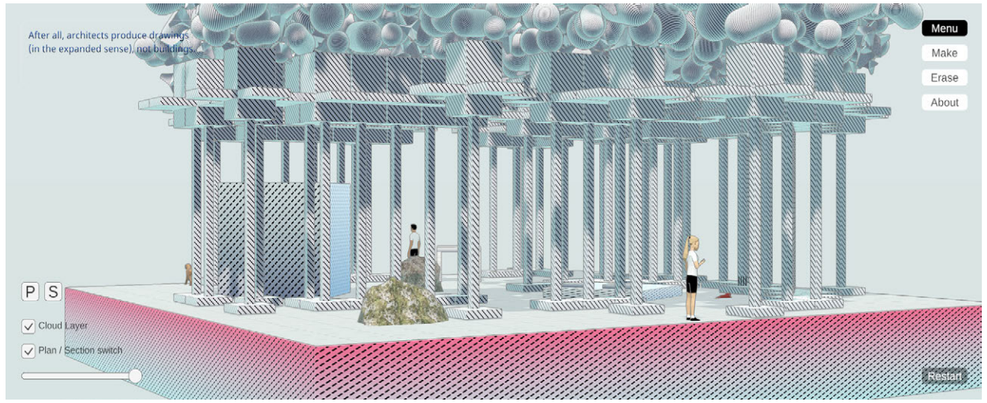


Figure 2. *The Cloud Garden*. Lifeforms.io (2021).

This World is designed as a neutral, delimited grid space, invoking both the utopia of Superstudio and the empty stage of software (that which we are exposed to when starting a new file in a software such as Maya or Rhino for example) (see Figure 5). The World here draws a parallel with the idea of the default space of digital design tools. In this reading, a software already contains a world, a cold, mathematical uniform reality that is presented as a neutral background, and this world contains infinite possibilities

13 Jay Martin, "Scopic Regimes of Modernity," in ***Vision and Visuality***, ed. Hal Foster (Seattle: Dia Art Foundation and Bay Press, 1988).

14 Lev Manovich, ***Software Takes Command*** (India: Bloomsbury Academic, 2013). For a great introduction into the problem of virtual space within the pictorial tradition, see also Lev Manovich, ***The Language of New Media*** (Cambridge, MA: The MIT Press, 2002).

for design while at the same time being biased towards specific kinds of outcomes. The empty space of a software tool already contains in it the universal space of modernity.

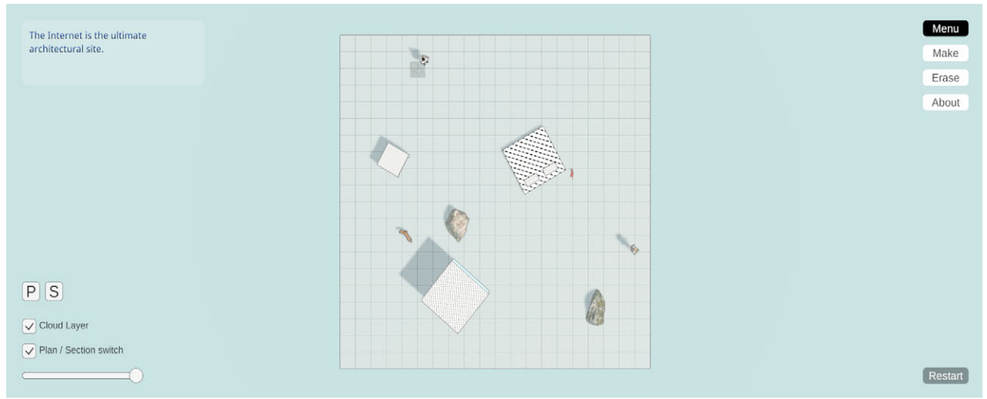


Figure 3. *The Cloud Garden*. Lifeforms.io (2021).

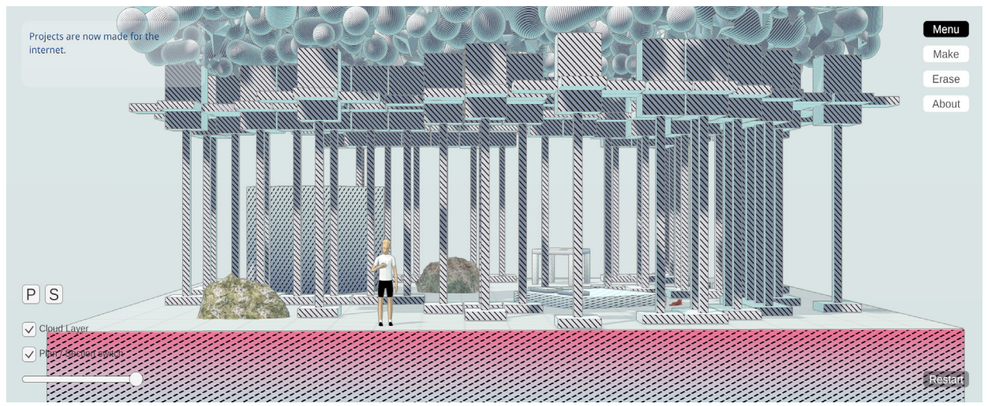
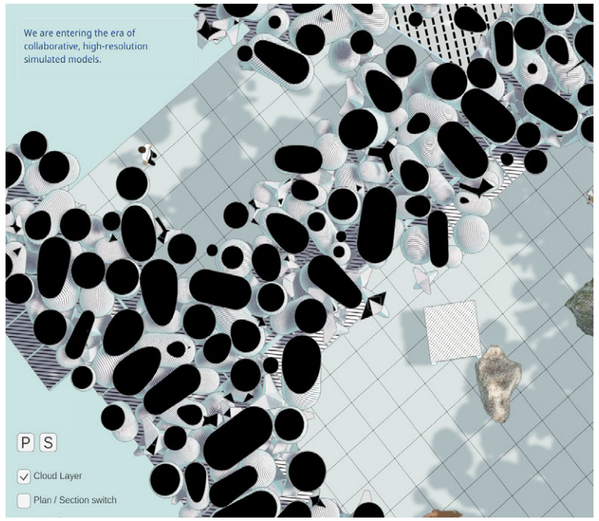


Figure 4. *The Cloud Garden*. Lifeforms.io (2021).

The project's main idea is to imagine what would happen if this world were inhabited by characters that go about their lives, and to imagine if the player acts as if they were a god, from the outside—being able to manipulate reality and affect the lives of these characters. The project attempts to comment on the realities of design production and the disconnect between tools and life that design software takes for granted.

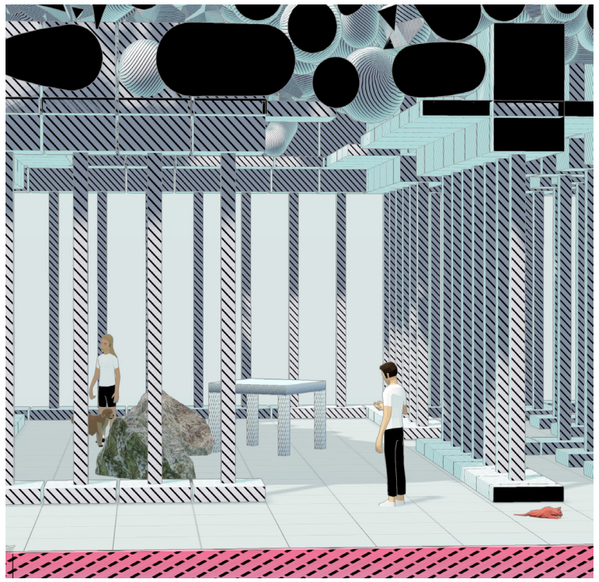
This World is further imagined as a very minimalistic house that contains only one enclosed box, one bed, and one table. At the beginning of each play session, these items are randomly distributed on the grid, which affects the characters' behavior and their decision-making process. The characters go about their daily routines—the humans are mostly on their phones, the cat lazily moves from one place to another, the dog is always watchful, etc. (see Figure 6). The routines can be interrupted by player input, but they cannot be fundamentally altered. The player can build pillars that support a roof-like structure over the entire site, and this structure serves to separate or connect the characters.



This story contains another story within it: a user interface panel displays an extra-diegetic text that serves as kind of a manifesto for a post-internet design. The project was produced in Unity as a WebGL build and can be played at bit.ly/thecloudgarden.

From this example, we could draw some preliminary conclusions on exactly what kinds of things we talk about when we talk about simulations.

Figure 5. *The Cloud Garden*. Lifeforms.io (2021).



To invoke multiple histories of technical objects, we could say that a simulation is a specific kind of an image and a specific kind of a model at the same time. First, we can understand simulations as a continuation of the history of the moving image, and animation in particular. There are a few primary similarities between these two formats, but there are many more crucial differences. Simulations are interactive, real-time, and potentially endless, while animations depend on determinism, sequencing, and scripted events. Animations are fully planned out and delineated, while simulations enable and promote randomness and

Figure 6. *The Cloud Garden*. Lifeforms.io (2021).

uncertainty. On the other hand, animations can be easily understood as part of the history of narrative making, and they easily lend themselves to (linear) storytelling; simulations have at least a contested relationship with the idea of a story and rely on a different kind of narration. As with the animations, the significance of the simulation format can also be understood when read as part of the history of drawing and rendering in architecture, or more precisely, with the history of modeling, understood as an umbrella term for all representational testing practices.

As ever-shifting and potentially infinitely long aesthetic formats, where probability and randomness produce a formless, percolating, and intractable pictorial space, simulations could be described as post-cinematic images, able to host multiple regimes of representation within the same World. In a simulation, different kinds of images, texts, and objects, but also whole different genres of representation, are able to coexist within the same space. Simulations are pictorial spaces that allow for an infinite blending of multiple, traditionally separate, or opposing aesthetic regimes: realist figuration of the landscape can coexist with cartoony characters and the abstraction of geometric or textual objects, supported by filmic elements. Simulations present us with a complete collapse of traditional aesthetic regimes into a unified, real-time pictorial multiverse.

Beyond Fictions

In recent years, the field of architecture has seen a normalization and acceptance of fictions as modes of thinking and design. In the works of such diverse practitioners as Design Earth and Liam Young, or in the works in Benjamin Bratton's *Terraforming*,[15] fictions are deployed as means of capturing (and making sensible, in Rancière's term)[16] very complex phenomena, such as planetary-scale urban conditions and the effects of the Anthropocene. What is evident from these projects is a clear break with traditional means of architectural representation, which cannot possibly describe or model such a level of complexity through their existing repertoire of techniques defined by the monoculture of seeing. This "storytelling turn" might be read as a means to connect architecture to the predominant visual culture of today, but it could also be read as an admission of the discipline's inability to model in the contemporary context.

The technical logic of a design fiction is the regime of compositing[17] and not that of a simulation. Design fictions inherit their vocabulary from cinema and animation, and thus produce results that follow the logic of storytelling and not modeling.

This brings us to a crucial aspect of the format: a simulation is not a fiction, or not merely a fiction. In the book *Virtual Worlds as Philosophical Tools*,[18] Stefano Gualeni traces a lineage of thinking about simulations to Espen Aarseth's 1994 text called *Hyper/Text/Theory*,[19] and specifically to the idea of cybertextuality. According to this line of reasoning, simulations contain an element not found in fiction and thus need an ontological category of their own. "Simulations are somewhere between reality and fiction: they are not obliged to represent reality, but they have an empirical logic of their own, and therefore should not be called fictions." This presents us with a fundamental insight into the use of simulations as the future of architectural design: they model internally coherent, testable Worlds and go beyond mere fiction making into Worldmaking[20] proper.

The work was a result of a renewed interest in exploring how nonlinear models are represented and imaged. One of the main ways in which video games achieve this is through techniques that come from System dynamics, a discipline that deals with the modeling of complex, unpredictable, and nonlinear phenomena. The field has its roots in the cybernetic theories of Norbert Wiener,[21] but it was formalized and created in the mid-1950s by Professor Jay Forrester at MIT[22] and later developed by Donella H. Meadows in her seminal book, *Thinking in Systems*.[23] System dynamics is an approach to understanding the nonlinear behavior of complex systems over time using stocks, flows, internal feedback loops, table functions, and time delays. Forrester's ideas were explored by the game designer Will Wright in a series of games that he designed for Maxis, including *SimCity*, *SimEarth,* and *The Sims*. This approach has since been adopted as one of the main ways to model game systems[24] as it enables an easier understanding of systemic depth and causality in time-based scenarios. The approach was also used in a series of early 2000s software projects by MVRDV[25] as a means of working with urban phenomena. In these projects, MVRDV worked actively on establishing interactive modeling as a valid and accepted practice for urban design, and produced a series of tools and applications that were used in real-world modeling scenarios. One of the main outcomes of the seminar was an understanding of the need to go beyond cybernetics and learn from contemporary, probabilistic ways of modeling through the use of machine learning.

Eventually, simulations could potentially enable an emergence of a new kind of architectural project, graced with a novel, AI-based take on dynamic systems approach to modeling and with a new legibility in its representational strategy. Simulations also open up a possibility for a project to become collapsed with its physical architectural counterpart. A simulation points to a possible future where the architectural project becomes a holistic, systemic collapse of the image, model, and physical space into a single time-based construct, which would dissolve the existing Albertian separation of idea and corpus into a new digital/physical continuum.

15 Benjamin H. Bratton. 2019. *The Terraforming*. Russia: Strelka Press.

16 Jacques Rancière. 2004. *The Politics of Aesthetics: The Distribution of the Sensible*. London: Continuum.

17 See Lev Manovich's *Velvet Revolution* for an early discussion on compositing. Lev Manovich, "After Effects, or Velvet Revolution," *Artifact* 1, no.2 (2007): 67–75, https://doi.org/10.1080/17493460701206744.

18 Stefano Gualeni, Virtual Worlds as Philosophical Tools: How to Philosophize with a Digital Hammer (Basingstoke, UK: Palgrave Macmillan, 2015).

19 Espen J. Aarseth, "Nonlinearity and Literary Theory," in *Hyper/Text/Theory*, ed. George P. Landow (Baltimore, MD: Johns Hopkins University Press, 1994).

20 For an expanded look at the idea of Worldmaking in the design context, see the research website www.worldmaking.xyz.

21 Norbert Wiener was a twentieth century, world-renowned mathematician and founder of the science of cybernetics.

22 Jay W. Forrester was a pioneering American computer engineer and systems scientist. Forrestor joined the Sloan School of Management at MIT in 1956 investigating the application of computers to management problems.

23 Donella H. Meadows, *Thinking in Systems: A Primer* (White River Junction, VT: Chelsea Green Publishing, 2008).

24 See, for example, Michael Sellers, *Advanced Game Design: A Systems Approach* (Boston, MA: Addison-Wesley Professional, 2018).

25 Winy Maas, *Space Fighter* (New York: Actar Publishers, 2021).

Bibliography

Aarseth, Espen J. "Nonlinearity and Literary Theory." In *Hyper/Text/Theory*. Edited by George P. Landow. Baltimore, MD: Johns Hopkins University Press, 1994.

Bratton, Benjamin H. *The Terraforming*. Russia: Strelka Press, 2019.

Campagna, Federico. "Stefano Gualeni, "Virtual Worlds as Philosophical Tools." *Overmorrow's Library*, presented by The Centre d'Art Contemporain Genève, December 10, 2020. Podcast, 23: https://overmorrows-library.simplecast.com/episodes/episode-6-stefano-gualeni-virtual-worlds-as-philosophical-tools.

Carse, James P. *Finite and Infinite Games.* Washington, D.C.: Free Press, 2013.

Cheng, Ian. "Wordling Raga 2: What is a World?" *Ribbon Farm* (blog), March 5, 2019. https://www.ribbonfarm.com/2019/03/05/worlding-raga-2-what-is-a-world/.

Cheng, Ian, and Nora Khan. *Emissaries Guide to Worlding: How to Navigate the Unnatural Art of Creating an Infinite Game by Choosing a Present, Storytelling Its Past, Simulating Its Futures, and Nurturing Its Changes.* Germany: Serpentine Galleries, 2018.

Eames, Charles, and Ray Eames, dirs. *Powers of Ten*. Eames Office, 1977.

Galloway, Alexander R *Gaming: Essays on Algorithmic Culture.* Minneapolis, MN: University of Minnesota Press, 2006.

Gualeni, Stefano. *Virtual Worlds as Philosophical Tools: How to Philosophize with a Digital Hammer*. Basingstoke, UK: Palgrave Macmillan, 2015.

Maas, Winy. *Space Fighter.* New York: Actar Publishers, 2021.

Manovich, Lev. *Software Takes Command.* India: Bloomsbury Academic, 2013.

Manovich, Lev. *The Language of New Media.* Cambridge, MA: The MIT Press, 2002.

Martin, Jay. "Scopic Regimes of Modernity." In *Vision and Visuality*. Edited by Hal Foster. Seattle: Dia Art Foundation and Bay Press, 1999.

Meadows, Donella H. *Thinking in Systems: A Primer.* White River Junction, VT: Chelsea Green Publishing, 2008.

Rancière, Jacques. *The Politics of Aesthetics: The Distribution of the Sensible*. London: Continuum, 2004.

Sellers, Michael. *Advanced Game Design: A Systems Approach.* Boston, MA: Addison-Wesley Professional, 2018.

If you are reading the ***Spatio-Visual Regimes*** book, please go to page **48**

If you are reading the ***Post-Screen*** book, please go to page **94**

If you are reading the ***Existential Scenarios*** book, please go to page **318**

A Purple Architecture

Design in the Age of the Physical-Virtual Continuum

Beom Jun Kim

A Project

A Plea for Negativity

The Possibility for Real Experience in a Virtual Space

Showing up in

[redacted]

Spatio-Visual Regimes Pictorial

Post-Screen Chunks

Existential Scenarios Human-Nature

Has been discussed in essays by

Marta Nowak
Kelly Bair
Martin Summers

Designed by Studio EP using MidJourney, and Runway

September 19th, 2023, 04:16 pm

Employing the keywords: [staged], [set design], data positivism, negative dialectics, virtual reality, media theory, digital architecture, big data, spatial computing, metaverse architecture, [on white background]

A Plea for Negativity

The Possibility for Real Experience in a Virtual Space

Beom Jun KIM

The Ontology of Purpleness

Purple is not an actual color. Rather, purple is a phenomenon of seeing blue and red at the same time, making purple merely an appearance of color, like a virtual reality, that does not actually exist. Purple, as it is used within the context of this book, seems to allude to a middle ground between red and blue and refers to a choice given to a fictional character from the movie *The Matrix* (1999).[1] The protagonist of the movie, Neo (Keanu Reeves), is offered a red or blue pill. One will reveal the true nature of his world; the other will let him continue along in the world as it has been, a false world of appearances. Neo's choice is obvious, at least when presented in this way, that truth is preferable over its alternative. However, the question we ask with our work, while engaging with notions of truth and appearances, is more nuanced. It instead asks: Is the world of appearances really one of falseness? Or better yet, can the world of appearances offer us a better way to reveal certain truths about our reality? Purpleness is thus the expression of red's relationship to blue, or truth's connection to appearances, and not the space between blue and red which, like the color purple, does not actually exist.

The question of truth and appearances is the basis of one of the oldest ontological inquiries we know of. Parmenides of Elea, an ancient Greek pre-Socratic philosopher, divides his ontology in two ways: Aletheia, the way of truth, or Doxa, the way of appearances.[2] Aletheia is the path towards an understanding of reality as one and only one thing, which, according to Parmenides, is being. This is based on his conclusion that nothing can come from nothing (*ex nihilo, nihil fit*), so all is, all must be, and within this singularity lies permanence, timelessness, and the totality of what it is to be. Doxa, on the other hand, is the appearance of reality filtered through the limits of our perception and as such is opinion, subjective, and incomplete. If Neo were to choose between Aletheia or Doxa instead of colored pills, his choice becomes much less clear as the way of truth is static, a dead end, whereas the way of appearances is dynamic and full of possibilities expressed through opportunity, interpretation, and agency.

Be it red or blue, truth or appearances, Aletheia or Doxa, each concept within the pair, in spite of their antithetical relationship, must be taken together for them to be meaningful. In other words, they cannot stand alone and they cannot be merely combined to create a new synthesis. Instead, their dialectic, like purpleness, is virtual, inchoate, and dynamic similar to the relationship between figure and ground. Is figure defined while ground is indeterminate? Only when both are experienced together will they have any meaning.

This dialectical approach was fundamental to our competition entry called *The Digital Mobius* (see Figure 1) for a temporary pavilion in Mexico City. For the public-facing temporary work, we aimed to create a mixed-reality pavilion that was both physical and immersive while atemporal and dynamic. New digital tools, specifically game engines interfaced through a smart device, were used to challenge the public with an architecture constantly in flux, changing through their participation. The project was one of mixing static form with dynamic virtual elements presented as a continuous data stream experienced through a smart device. The content of this stream rested on the participants' contribution to the space as they created a living record of the event through images, videos, and text posted online. Like the appearance of purpleness, the project would be meaningless without both the real and the virtual experienced together.

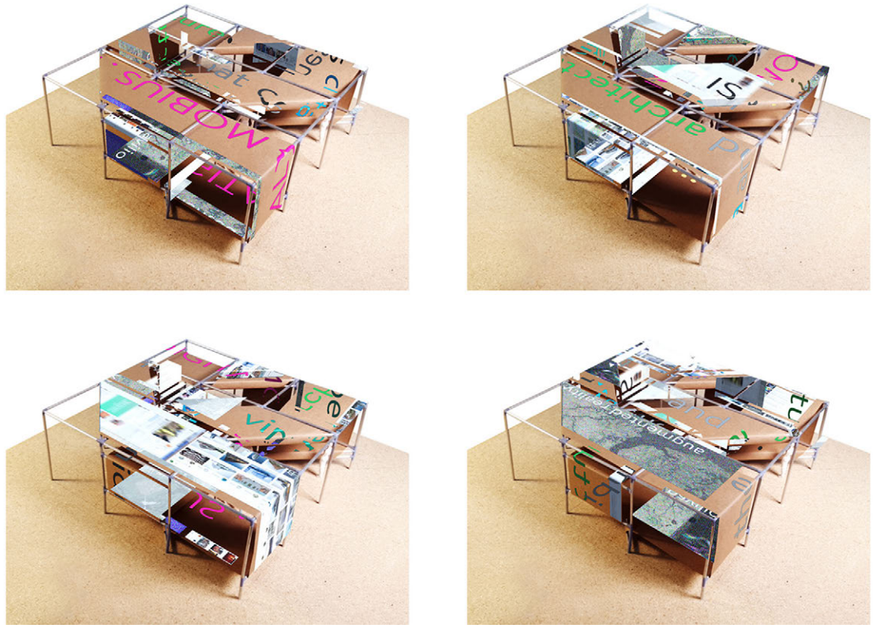


Figure 1. *The Digital Mobius:* Augmented Reality Proof of Concept Model. WA.K Studio (2020).

The Fetishization of the Positive

"When I speak of 'negative dialectics' not the least important reason for doing so is my desire to dissociate myself from this fetishization of the positive."[3] For Theodor Adorno, dialectics offered the only way to connect undefinable concepts to objects through a process of contradiction. An important example of this is his description of art's relationship to "natural beauty" in which the object of art is inseparable, through contradiction, from the undefinable concept of beauty.[4] "Art is not [beauty], a belief that idealism hoped to inculcate, but art does want to keep [beauty's] promise. It is capable of

1 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

2 Parmenides, ***Fragments***, trans. David Gallop (Toronto: University of Toronto Press, 1984), frag. 2–3, 6–7, 9–19.

3 Theodor Adorno, ***Lectures on Negative Dialectics*** (Cambridge, Polity Press, 2008), 51.

4 Theodor Adorno, ***Aesthetic Theory*** (London: Continuum, 2004), 133.

this only by breaking that promise; by taking it back into itself."[5] Art, in its positivity, can only call forth the negativity of natural beauty as its antithesis. The two are connected in the same way that figure is antithetical to ground. Writing about technology's impact on art's new social function, Walter Benjamin applies this dialectic to architecture which is experienced both "perceptively" and "tactiley," or as both an object and in its habitual use.[6] For Benjamin, architecture was the art form that had a relationship to society in the same way that new technologically reproduced media now does, with the objective built form of architecture having a dialectical connection to society's systems and values.

Both Benjamin and Adorno were responding to industrial capitalism's tendency to co-opt the modes of cultural production for the sake of profit and to distract and manipulate the masses. Adorno states, "Art stands in for nature through its abolition in effigy; all naturalistic art is only deceptively close to nature because, analogous to industry, it relegates nature to raw material."[7] In this "culture industry," as Adorno calls it, the factory-based models of industrial capitalism convert culture into a standardized manufactured product. Benjamin's critique of early twentieth-century media culture eerily rings true today when he wrote "quantity has been transformed into quality: the greatly increased mass of participants has produced a different kind of participation."[8] The type of participation he is referring to is a state of distraction in which an individual is inundated with images, unable to focus on any one.

Figure 2. *The Digital Mobius:* Augmented Reality Proof of Concept Model. WA.K Studio (2020).

The Digital Panopticon

The role and dissemination of mass media today has increased logarithmically since Benjamin's time through new developments like digital technology and the internet, functioning under the regime of neoliberal capitalism. A thorough prognosis of data positivism under neoliberal power structures can be found in Byung-chun Han's *Psychopolitics*, where he embodies these new mechanisms power in the "Digital Panopticon,"[9] renewing Michel Foucault's reference to Jeremy Bentham's panoptic prison.[10] Han is essentially renewing Foucault's model of surveillance and control under the lens of Big Data, which outstrips the statistics-based subjugation and institutionalization as Foucault asserted, to one of self-subjugation, specifically through our interconnected digital lives within the psycho-social dynamics of the internet and social media.[11] This self-subjugation involves processes like gamification,[12] a form of operant conditioning, but also the exploitation of our psychology, including our pro-social tendencies towards seeking validation as part of what Han calls today's "achievement society" that is always striving for unlimited self-improvement, which ultimately leads to burnout.[13]

We are arriving at a point, though, where we begin to see evidence of the adverse impact data positivism is having on cultural and artistic innovation as we continue to fail to heed the warnings of Adorno, Benjamin, and others. Symptoms of this affliction within the field of architecture are perhaps best seen in a return to pastiche or the post-digital representations identified by Mario Carpo,[14] which favor tried and tested models of architectural representation over rigorous innovation. Another symptom is our participation in architecture's version of the digital panopticon rooted in the PR-rchitecture of social media click-bait and design blogs.[15] With the vast quantity represented by Big Data and the ubiquity of the internet, it is hard to argue that the positivism of "likes" on the internet today, do not stand in for real, or at least useful, measures of beauty. Indeed, quantity has become quality.

The Digital Mobius (see Figure 2) utilizes the very same tools of digital technology to posit new forms of architectural engagement beyond the physical or real as the locus for what Benjamin identified as the use and habit of architecture's dialectic. "Architecture has always offered the prototype of an artwork that is received in a state of distraction and through the collective."[16] The hope for *The Digital Mobius* is for a direct engagement between media and architecture where the conditions of space are an immediate expression of those who occupy it at any given moment, keeping the project undefined and constantly in flux. With each passing moment, each additional user participates in an act of design that engages the "other," the unknowable, incalculable, and unquantifiable. In other words, *The Digital Mobius* seeks to connect with purpleness through chance and interpretation, and to ultimately restore architecture's relationship with negativity.

5 Theodor Adorno, ***Aesthetic Theory*** (London: Continuum, 2004), 140.

6 Walter Benjamin, "The Work of Art in the Age of Its Technological Reproducibility," in ***Selected Writings Volume 3***, ed. Howard Eiland and Michael W. Jennings (Cambridge: The Belknap Press, 1997), 120.

7 Theodor Adorno, ***Aesthetic Theory*** (London: Continuum, 2004), 140.

8 Benjamin, "The Work of Art in the Age of Its Technological Reproducibility," 119.

9 Byung-chul Han, ***Psychopolitics: Neoliberalism and New Technologies of Power*** (London: Verso, 2017), 6.

10 Michel Foucault, ***Discipline and Punish: The Birth of the Prison*** (New York: Vintage Books, 1995), 200.

11 Byung-chul Han, ***Psychopolitics: Neoliberalism and New Technologies of Power*** (London: Verso, 2017), 41.

12 Ibid., 49.

13 Byung-chul Han, ***The Burnout Society*** (Redwood City, CA: Stanford University Press, 2015), 8.

14 Mario Carpo, "Post-Digital 'Quitters': Why the Shift Towards Collage is Worrying," ***Metropolis***, March 26, 2018, https://www.metropolismag.com/architecture/post-digital-collage/.

15 Kate Wagner, "No, PR-chitecture won't save us from the pandemic," ***Architect's Newspaper***, June 12, 2020, https://www.archpaper.com/2020/06/opinion-no-pr-chitecture-wont-save-us-from-the-pandemic/.

16 Benjamin, "The Work of Art in the Age of Its Technological Reproducibility," 119.

Bibliography

Adorno, Theodor. *Aesthetic Theory*. London: Continuum, 2004.
Adorno, Theodor. *Lectures on Negative Dialectics*. Cambridge: Polity Press, 2008.
Benjamin, Walter. "The Work of Art in the Age of Its Technological Reproducibility." In *Selected Writings Volume 3*, edited by Howard Eiland and Michael W. Jennings, 101–33. Cambridge: The Belknap Press, 1997.
Carpo, Mario. "Post-Digital 'Quitters': Why the Shift Towards Collage is Worrying," *Metropolis*, March 26, 2018, https://www.metropolismag.com/architecture/post-digital-collage/.
Foucault, Michel. *Discipline and Punish: The Birth of the Prison.* New York: Vintage Books, 1995.
Han, Byung-chul. *The Burnout Society*. Redwood City, CA: Stanford University Press, 2015.
Han, Byung-chul. *Psychopolitics: Neoliberalism and New Technologies of Power*. London: Verso, 2017.
Parmenides. *Fragments*. Translated by David Gallop. Toronto: University of Toronto Press, 1984.
Wachowski, Lana, and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.
Wagner, Kate. "No, PR-chitecture won't save us from the pandemic," *Architect's Newspaper*, June 12, 2020, https://www.archpaper.com/2020/06/opinion-no-pr-chitecture-wont-save-us-from-the-pandemic/

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Julia Koerner

A Project

Showing up in [redacted]

Spatio-Visual Regimes Immersive

Post-Screen Systems

Existential Scenarios Human-Nature

[fabric]

Aesthetic Qualities Between the Body and the Building

Has been discussed in essays by

Stephen Caffey
Janice Shimizu
Martin Summers

Designed by Studio EP
using MidJourney, and Runway

September 16th, 2023,
07:56 pm

Employing the keywords:
[staged], [set design], architecture, spatial design, fashion design, material, fabric, 3D printing, garment, material science, natural patterns, [on white background]

[fabric]

Aesthetic Qualities Between the Body and the Building

Julia KOERNER

The Meaning of [fabric]

Purple qualities assist in responding to today's climatic crisis first by rethinking urban manufacturing and sustainable fabrication of textiles and, second, by contributing to the atmosphere and experience of a spatial condition in the constructed and built environment. Here, three three-dimensionally (3D)-printed projects, the *Hybrid Holism Dress,* the *Setae Jacket*, and the *Kelp Mini Clutch*, show the diversity of material matter and applied emergent technologies, which influence the aesthetic outcomes of design and craftsmanship at the microscale of architecture and evoke ideas for future applications in the built environment.

[fabric] is a cloth made by weaving or the texture of a knitted material; at the same time *[fabric]* can mean a building or edifice, a framework or structure, or a method of constructing. The word dates from 1475 and originates in the Latin *fabrica* workshop, faber craftsman, and the process of building. Today we must consider building virtual worlds, as well as fabricating digital spaces and constructing virtual realms, collectively referred to as digital craftsmanship. In the process of digital fabrication these spatial mediations are transformed to be physical and tangible, and therefore become real. That is, while there is a loss of information due to technology's limited accuracy, additive manufacturing enables me to translate, to construct these mathematical geometries rather real. They appear non-handmade/non-human but crafted by machines. For me, the aesthetic qualities in this process of *[fabric]* constitute a purple condition in a spatial experience. Computational design and digital fabrication techniques enable me to create aesthetics which appear otherworldly, not handmade, based on mathematical constructs but appearing naturally grown.

Wearables protect us from climatic conditions, they provide privacy and comfort, and they reflect our style and personality. Building facades, in the same way, provide comfort, privacy, and protection from the weather, and they showcase typology and style. The link between architecture and fashion is a perceptible phenomenon in both theory and practice through many contemporary pioneers, including Frank Lloyd Wright, Adolf Loos, Coco Chanel,[1] and Josef Hoffman.[2] Designing the architectural surface was frequently understood as being similar to designing a garment. The foundation of this connection between textiles, or dresses, and architecture had been laid in the mid-nineteenth century in architect Gottfried Semper's *Principle of Dressing*[3]. At the turn of the century, it had become a trend to not only design empty walls but to think about adornments and three-dimensional wall ornamentation. For the purposes of this chapter, the envelope of a building can be understood as a layer of a garment; while the dress is our immediate layer around the skin, the building is an extended layer of dressing. Therefore, a building can be understood as a dress.

1 Marcel Haedrich, ***Coco Chanel; Her Life, Her Secrets*** (Boston, MA: Little, Brown & Company, 1972), 262.

2 Christoph Thun-Hohenstein, Matthias Boeckl, Rainald Franz, and Christian Witt-Dörring, eds., ***Josef Hoffmann 1870–1956: Progress through Beauty*** (Basel, Switzerland: Birkhäuser, 2021).

3 Ákos Moravánszky, ***Metamorphism: Material Change in Architecture*** (Basel, Switzerland: Birkhäuser Verlag, 2017), 217.

Garments as an Exploration into Micro Architecture

For me garments are architecture in its smallest scale, the space directly around our bodies. *[fabric]* can operate within varying scales. The *Hybrid Holism Dress* and the *Setae Jacket*, two 3D garments I digitally designed, span a decade of technological advancements, evolving material science, and design research.

The *Hybrid Holism Dress* is one of the first 3D-printed garments, printed with a honey-colored resin (see Figure 1).[4] The design was showcased in Iris Van Herpen's *Haute Couture* show in Paris, as well as in several international architecture exhibitions. The dress exemplifies the convergence of two disciplines: fashion and architecture. The digital design process is labor intensive and requires many hours of development on the computer. Nature-inspired leaf structures are recreated in the computer and then printed by the machine, pushing the boundaries of technological possibilities (see Figure 2). The computational design combines a geometric understructure created with generative design tools, as well as organic leaf structures, inspired by Ernst Haeckle's[5] drawings, which were designed with 3D polygon modeling. This type of digital craftsmanship enables me to fabricate 3D morphologies that are nature-like and mimic biology. This 3D process in the computer is scaleless, and one can experience the 3D file virtually as a building, as one can zoom inside the dress and digitally walk through it from within. The 3D printing process took several days, and engineers manually finished the pieces in post-processing production. The natural raw amber material coloration of the liquid resin, in combination with the highly digitally generated patterns, appear synthetic and at the same time naturally grown. The digital process allows for perfect symmetry, while in nature this is nonexistent; even the faces and anatomy of human bodies are not perfectly symmetrical. This apparent perfection and ambiguity create an interplay between physical, tangible space and the virtual. The scenario evokes purple qualities, such as excitement and curiosity, about the space and detail for the viewer.

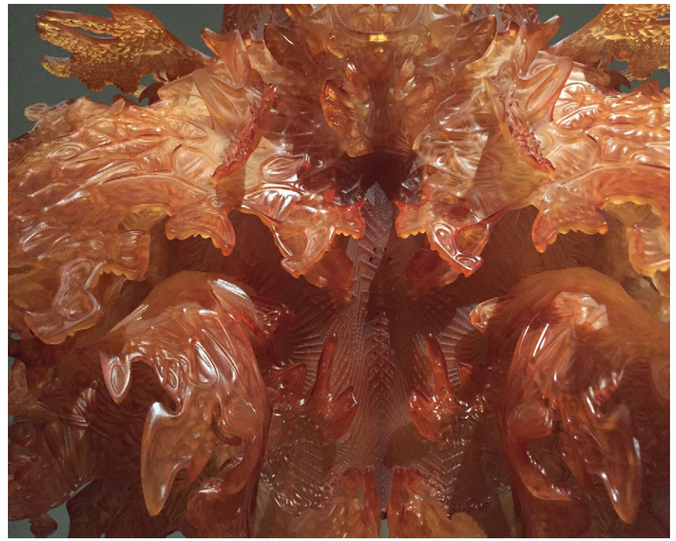

Figure 1. *Hybrid Holism Dress.* Photography by Khaled Sadiyyah (2016).

While the *Hybrid Holism Dress* is printed in 3D, meaning the garment is taken out of the

4 The ***Hybrid Holism Dress*** is a 3D-printed garment, a collaboration between Iris van Herpen and Julia Koerner, produced with Mammoth Stereolithography, by 3D-printing company Materialise, in Belgium, in 2012. It is now part of the permanent collection of the Metropolitan Museum of New York (MET) and the High Museum Atlanta.

5 Ernst Haeckel, ***Art Forms in Nature*** (Mineola, NY: Dover Publications, 1974), Figure 83.

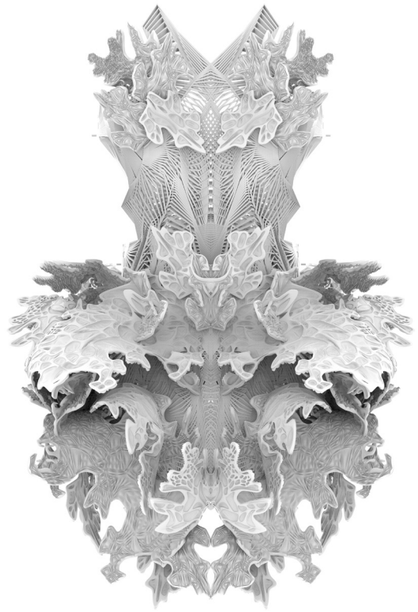

Figure 2. *Hybrid Holism Dress.* Rendering by Julia Koerner (2012).

machine in the third dimension, the *Setae Jacket* is fabricated in an entirely different process. The *Setae Jacket* is one of the first 3D-printed garments produced with a technology in which multicolor polymer is 3D-printed directly onto a textile (see Figure 3). The design was initiated through the research of natural patterns, particularly butterfly wing patterns and their microscopic structure: the wings are made up of membranes covered by thousands of colorful scales and hairs, or plate-like setae. These hair-like structures help the butterfly during flight to sense wind, temperature, and the location of their body parts. Photographs of the Madagascar Sunset Butterfly's wing setae are digitized into an algorithm that translates the color pixels into 3D bristle patterns, corresponding to the form of the garment design (see Figure 4). Each bristle is an independent structure that is printed on white denim fabric. While the design is developed in 3D, it is unrolled into 2D cutting patterns and printed in a flat process on textiles. The digital designs are 3D-printed in an innovative way, without any support material, therefore eliminating sacrificial support material and optimizing the printing process. Later, the flat pieces are sewn by hand and assembled in a physical space. The separation of the 3D print from the body through a fabric enhances the wearability, durability, and comfort of the jacket in comparison to existing 3D-printed fashion techniques. The relation between the colorful rigid setae and the flexible fabric create enigmatic visual effects when the garment is in motion and reveal purple qualities and characteristics. Since the color pixels are simple square extrusions which adhere to the textile in a normal (perpendicular) angle, when the fabric moves, they move in a direction normal with the fabric, producing a mesmerizing effect. Though the bristles are rigid, they evoke a soft flexible movement and invite the viewer to touch and explore them. The garment showcases the advancements of cutting-edge technology, science, and art over the past decade.[6]

6 The *Setae Jacket* is part of the Chro-morpho collection by Stratasys, which was part of the traveling exhibition *Designs for Different Futures* curated by Michelle Millar Fisher, and has been exhibited at the Philadelphia Museum of Art in 2019 and the Walker Art Center in 2020. It was also showcased at the Museum of Applied Arts (MAK) in Vienna and the Austrian Cultural Forum New York in 2022.

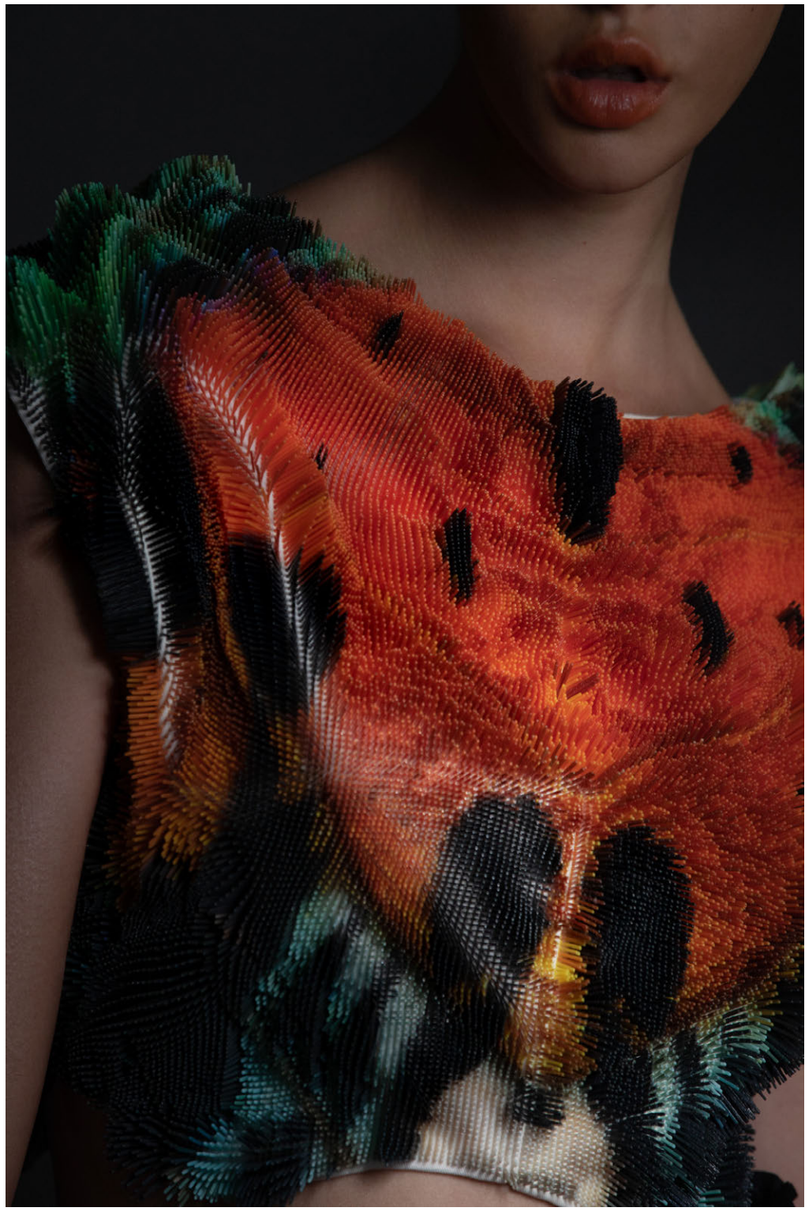

Figure 3. *Setae Jacket.* Photography by Ger Ger (2019).

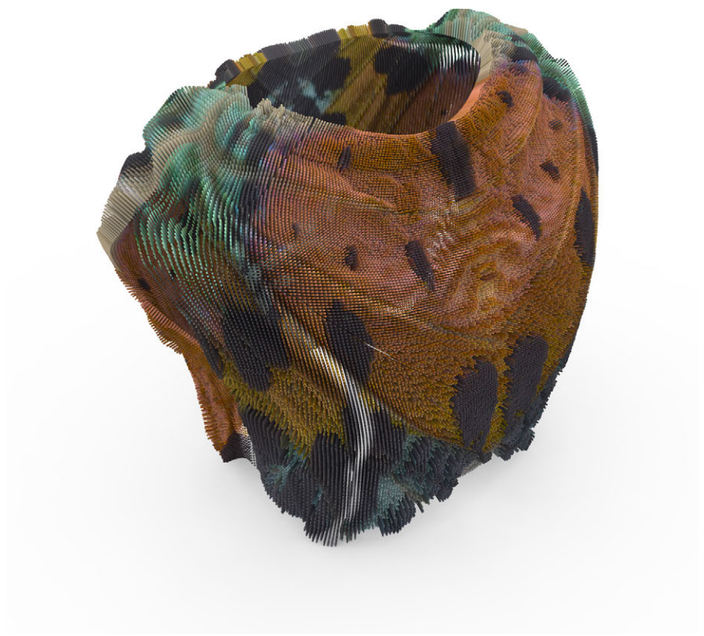

Figure 4. *Setae Jacket.* Rendering by Julia Koerner (2019).

The third design, the *Kelp Mini Clutch*, showcases purple qualities by responding to today's climate crisis by rethinking urban manufacturing and sustainable fabrication (see Figure 5). The accessory is inspired by natural kelp structures found along the Pacific coastline. Several designs featured the kelp artifacts I collected in Malibu, California, 3D-scanned, and digitally crafted with kelp-inspired geometries. In 2015, I designed the *Sporophyte Collection*, which included the *Kelp Mask*, *Kelp Jacket*, and *Kelp Necklace*, the latter which is now part of the permanent collection at the MAK: Museum of Applied Arts Vienna. The new *Kelp Mini Clutch,* which I designed for JK3D, is showcasing my ambition towards innovative, sustainable, and iconic designs.

The *Kelp Mini Clutch* features voids between its intricate geometry, which create unique visual effects together with the translucency of the material and also results in a lightweight clutch with a practical interior space. I designed the handbag in three colors: Midnight Blue, Slate, and Mauve. These colors are novel as they highlight the literal translation of seaweed, one of the most sustainable plants on this planet. They additionally illustrate a high degree of digital complexity, which can only be crafted with 3D printing technology. Yet they are made from plants, like soy and corn, that are transformed into polymers. Our fabrication process utilizes renewable and biodegradable resources and is manufactured in-house, locally in Los Angeles and Vienna, with renewable energy, thereby reducing our product lifecycle carbon footprint. This process exemplifies how urban manufacturing can be rethought and disrupt traditional fabrication processes.

The three designs showcase the possibilities of how purple qualities can contribute to the atmosphere and experience of a spatial condition around the body, the immediate space surrounding us. The scale of wearables allows me to explore geometries, innovative materials, and emergent technologies in the context of applied research at a microscale. I see an opportunity for the research to be applied on a larger scale in a variety of ways. I envision the setae pattern as a second skin around a building allowing the building to breathe and ventilate the interior, while reflecting light and color. I imagine the kelp structure as a scaled-up scaffolding surrounding an existing building as structural support. There is also the potential to assist in cooling or heating aspects of a building by having liquid run through its veins under certain climatic conditions.

As technologies advance and materials are further developed, I am positive that these purple qualities will find their way into the built environment on a larger scale, perhaps within the application of innovative building skins that respond to the climatic challenges we face in today's world.

Figure 5. *Kelp Mini Clutch.* Photography by JK3D (2022).

Bibliography

Haeckel, Ernst. *Art Forms in Nature*. Mineola, NY: Dover Publications, 1974.
Haedrich, Marcel. *Coco Chanel; Her Life, Her Secrets*. Boston, MA: Little, Brown & Company, 1972.
Moravánszky, Ákos . *Metamorphism: Material Change in Architecture*. Basel, Switzerland: Birkhäuser Verlag, 2017.
Thun-Hohenstein, Christoph, Matthias Boeckl , Rainald Franz, and Christian Witt-Dörring, eds. *Josef Hoffmann 1870–1956: Progress through Beauty*. Basel, Switzerland: Birkhäuser, 2021.

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A Purple Architecture

Design in the Age of the Physical-Virtual Continuum

Please scan the QR code for the augmented reality (AR) experience.

Ferda Kolatan

A Project

Showing up in

[redacted]

Spatio-Visual
Regimes
Spatial

Post-Screen
Chunks

Existential
Scenarios
Human-Nature

Balat Bits
An Architecture of the Residual

Has been discussed in essays by

Dora Epstein Jones
Kelly Bair
Martin Summers

Balat Bits

An Architecture of the Residual

Ferda KOLATAN

Hybrid Artifacts with Architectural Qualities

> My working assumption is that fictions and fabulations are basic modes of sentience; and that cognition per se is derived from them and cannot exist without them.
> —Steven Shaviro, Discognition[1]

Balat Bits is an architectural fable of sorts. Set in the old and vibrant neighborhood of Balat on the historical peninsula of Istanbul, the bits can be best described as urban artifacts with architectural qualities.[2] With no particular site, program, or client, the bits are not meant to address specific building-related concerns but to raise awareness of the architectural potential that lies in the leftovers produced by large postindustrial cities. These residual objects include strangely mismatched building elements, leftover infrastructural components, dysfunctional street furniture, and other forgotten or misused objects that once carried cultural meaning and belonged to a functioning whole that over time, or by circumstance, have lost their original significance and purpose. Through a set of fictitious renderings, *Balat Bits* depicts various architectural conglomerations that are assembled from such odd parts and seek to rehabilitate them back into the urban environment as newly significant hybrid artifacts.

The representational style in which the artifacts are rendered follows the rich tradition of the architecture fantasy drawing.[3] Fitting for the protagonists of a fable, *Balat Bits* is at the same time made-up and real. While all the parts are taken literally from existing conditions, the hybrid totality is a fabulation. Rendered as individual decontextualized entities, floating on white backgrounds, the bits are reminiscent of characters in a graphic novel—only their stories do not unfold along a linear narrative trajectory. Rather, *Balat Bits* incorporates stories with multiple spatial, temporal, and material timelines into hybrid forms. The geometries, shapes, textures, colors, and patterns from which the bits are assembled still carry, albeit as a faint echo of former times, their individual material and cultural histories within them. Some of these histories are manifested in mundane everyday items like steps, fences, downpipes, and handrails, while others describe more special conditions like a unique fountain ornament, a preciously crafted corner detail, or the delicate ironwork on a gate. *Balat Bits*, by forging together such different objects, properties, and values, fosters an architecture of affinity and unlikely collaborations.

1 Steven Shaviro, *Discognition* (London: Repeater, 2016).

2 Balat is located at the Golden Horn on the northern shore of Istanbul's Historic Peninsula. It is a particularly vibrant neighborhood today and was home to Greek, Jewish, Armenian, and Turkish communities over its long history. This diverse cultural heritage is reflected in Balat's architecture, which combines many different building types, styles, and features within a relatively small perimeter.

3 *Balat Bits* expands on the rich tradition of the architecture fantasy drawing and in particular on the Rocaille. A concoction of real and fictional elements that incorporated tectonic, natural, and artistic elements, the Rocaille was usually depicted as a free-floating ornament that could be applied to architecture in different scales and types.

The Ecology of Residual Architecture

Like all fables, *Balat Bits* conveys a moral too. Or perhaps more accurately, it poses a question with ethical ramifications that reach beyond the artifacts themselves. Why, in an age of dwindling natural resources, wasteful construction practices, and growing cultural diversity, does urban architecture concern itself so little with the incorporation of the existing and particularly the residual? The merits of an architectural approach that recycles residual leftovers into newly collaborative urban artifacts should be self-evident. By dealing with objects that have fallen into disarray, a whole new arena opens for design in cities. The city becomes a vast depository from which new combinatorial architectures can arise. By utilizing this depository and reappropriating its content, architectural design would resist the endless cycles of demolition and rebuilding that haunt the postindustrial city.[4] These cycles are ecologically unsustainable, and they also tend to homogenize cities and diminish those qualities that make urban environments so compelling to us in the first place, namely their proclivity to foster complex relationships, diverse cultural entanglements, and spontaneous participatory interactions among their inhabitants.[5]

The composite structure and mosaic features of *Balat Bits* are thus not merely a formal exploration in a particular neighborhood in Istanbul—a neighborhood marked by countless incongruous moments, residual leftovers, and odd juxtapositions—but one specific example for how to widen the scope of urban architecture in general and to broaden its appeal without continuing to deposit more new stuff into the world. In other words, the goal is to innovate without having to rely on older notions of novelty. Historically, the "new," as an avant-garde concept, is tightly associated with the modern metropolis of the early twentieth century when progress became inseparably linked to concepts of newness manifested through technological means.[6] To move the twenty-first-century city beyond the tropes of the modern metropolis, their detrimental effects on the environment and on pluralist sociocultural expression, progressiveness needs to be disassociated from past conceptions of the new.

This appeal for a different kind of new does not simply call for different methods of preservation practices or herald existing forms of urban renewal, restoration, or reuse. Residual architecture, as exemplified by *Balat Bits*, distinguishes itself from all these approaches in one critical facet: it does not promote an ideology based on dichotomies such as old/new, useful/useless, or mundane/precious. For in these binary pairings is still mirrored the larger modern maxim that the world can (and should) be organized in neat categories and that the ways in which we assess value in things are contingent on the hierarchies and asymmetries drawn by these antagonistic pairings. In contrast, residual architecture does not enforce any rigid boundaries but instead embodies principles of mixing, meshing, and merging, in which difference is always already an active component within a manifold whole rather than a dividing denominator of oppositional factions.

A Different Kind of Real

Returning to our fable, we can now summarize the plot. Like all material processes, cities generate

4 Global embodied carbon emissions tied to building construction and demolition is estimated at around 13%. See "Why the Built Environment?" Architecture 2030, www.achitecture2030.org.

5 One example of this large-scale homogenization in Istanbul would be the projects developed by TOKI (Mass Housing Development Administration).

6 Ideologies equating newness with technological advancement go back to the Enlightenment era but found their most ardent expressions in the years between the two World Wars as evidenced by the works and manifestos of movements like Russian Constructivism, Futurism, and the Bauhaus.

fallout. Over time, urban forms, objects, and materials layer on top of each other, intersect, and overlap to create new conglomerate hybrids that no longer resemble their original individual states. In these unexpected juxtapositions a different kind of city reveals itself, a city that superimposes the accidental qualities of the everyday over the coordinated actions of city planners, developers, and architects. A residual architecture that draws from this alternative city is more likely to reflect the diverse interests and desires of its inhabitants as it reappropriates familiar architectural features and maintains, albeit in different guises, the historical heritage of a given place. By deploying quotidian aesthetic cues and using small-scale and ad hoc design tactics, residual architecture is both accessible and innovative while rejecting avant-garde notions of novelty as complicit in the ideologies that deplete natural resources and limit expressions of cultural diversity.[7]

Figure 1. *Balat Bits*: Artifact I, Istanbul. Ferda Kolatan with Esin Karaosman (2022).

7 To support their ideologies, most early twentieth-century avant-garde movements advocated a universal formal language over individual expression. The strong reliance on technology inevitably diminished the role of nature to a mere resource in the service of societal advancement.

But why choose the genre of fable and fantasy drawing to touch on these larger questions? Surely reality offers enough opportunities to test the premises of a residual architecture without the detour into the fictional realm, which ultimately may come across as an attempt to avoid the issues at hand. This question hinges on what we mean by *real* in the context of architecture and the city. Most of the time, we use the word reflexively to describe physical existence—a building is real because it materially exists in space and time. However, this seemingly commonsense approach does not hold up under closer scrutiny. For instance, one could reasonably argue that in the Western intellectual tradition, "real" architecture has very little to do with physical manifestation and is instead determined primarily by discipline, discourse, and canon. Here, the real acts much like a seal of approval by which institutional or academic authorities assure a work's inclusion into the "archive".[8]

The architecture of the residual stands in direct contradistinction to the "real" architecture of the archive. With no discourse propping it up, no canon enshrining it, and barely recognizable as "capital A" architecture in the first place, residual architecture has no access to the machinations of the real as privileged in Western discourse. In this sense the work presented here occupies a distinctly "purple" space. Not real enough to rise to the standards governing conventional definitions of architecture and yet undeniably real as existing material objects ensuing from actual urban processes, residual architecture is fundamentally liminal in its character. As Steven Shaviro alludes to in his quote above, fabulations and fictions are, in the last instance, the very foundation from which we acquire knowledge about the world and ultimately perceive reality.[9] In this sense, *Balat Bits* conjures up an alternative vision for the city, where fallout turns into surplus and neglected urban elements become real architecture (see Figures 1–4).

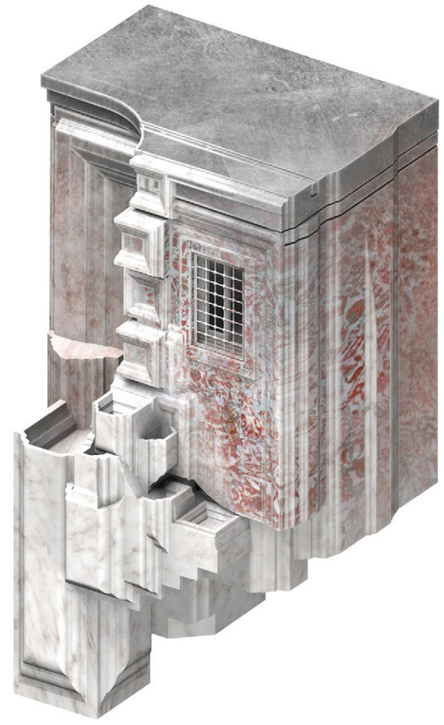

Figure 2. *Balat Bits*: Artifact II, Istanbul. Ferda Kolatan with Esin Karaosman (2022).

8 Boris Groys writes eloquently about the significance of the "archive" in establishing the value of art in Western culture. Boris Groys, ***On the New*** (London: Verso Books, 2014), 63.

9 Steven Shaviro, ***Discognition*** (London, UK: Repeater, 2016).

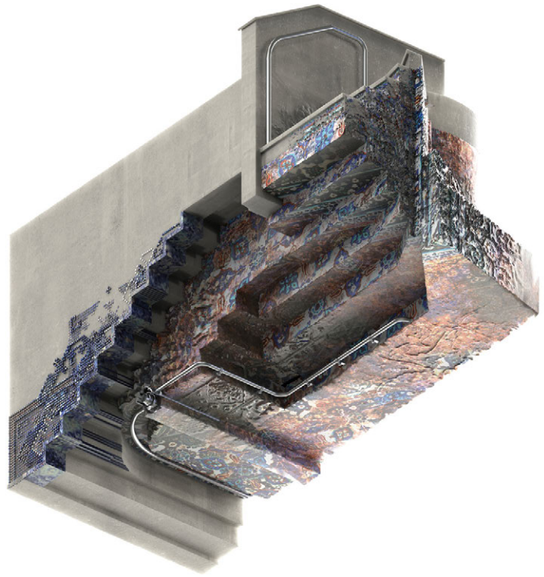

Figure 3. *Balat Bits*: Artifact III, Istanbul. Ferda Kolatan with Esin Karaosman (2022).

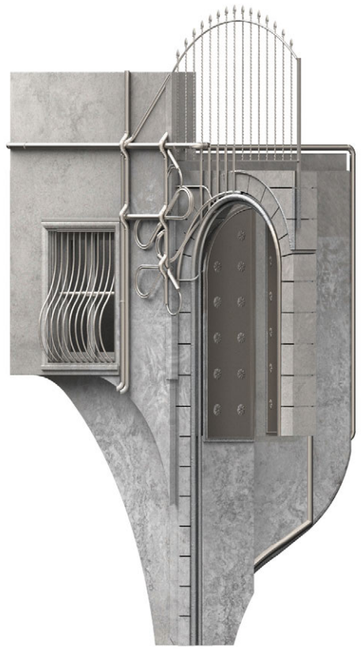

Figure 4. *Balat Bits*: Artifact IV, Istanbul. Ferda Kolatan with Esin Karaosman (2022).

Bibliography

Groys, Boris. *On the New*. London: Verso Books, 2014.
Shaviro, Steven. *Discognition*. London: Repeater, 2016.

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If you are reading the ***Post-Screen*** book, please go to page 204

If you are reading the ***Existential Scenarios*** book, please go to page 142

Andrew Kovacs

A Project

Showing up in

[redacted]

Spatio-Visual
Regimes
Pictorial

Post-Screen
Chunks

Existential
Scenarios
Human-Human

Life of a Model

The Trials and Tribulations of the Chicago Model

Has been discussed in essays by

Marta Nowak
Kelly Bair
Ayad Rahmani

Designed by Studio EP
using MidJourney, and Runway

September 13th, 2023,
02:36 pm

Employing the keywords:
[staged], [set design],
architecture, colorful, 3D
collage, doll house, toy, scale,
kitbash, hybrid, mixed parts,
[on white background]

Life of a Model

The Trials and Tribulations of the Chicago Model

Andrew KOVACS

The Chicago Model

In architecture, a model generally starts to deteriorate after it is completed. Sometimes models are produced for special purposes and have special lives afterwards. At times, models are saved and/or collected and live in museums and on desks and storage cabinets. But most times, models are discarded or recycled after they have served their purpose.

The Chicago Model referenced the work of the architect Sir John Soane and was produced for the 2017 Chicago Architecture Biennial, *Make New History* (see Figure 1). Through the format and context of the Biennial's Room of Plinths, the model remixed the reference material of Soane to make architecture from architecture. The construction methodology of *The Chicago Model* oscillated between collection and production, where objects found in the physical world were used to construct an architectural model that was itself a proposal. *Proposal for Collective Living* primarily manifests through an architectural model and is constructed with a deliberate hybrid manner. Therefore, the construction of *The Chicago Model* combines traditional architecture model-making techniques with three-dimensional (3D) collage to produce a model that is a hyperreal[1] representation of collective living, a new form of human habitation. As such, *The Chicago Model* is a construction where the ordinary is turned into the extraordinary, the banal is made fantastic, the miniature becomes colossal, the real and virtual are collapsed, and the conception of the city is a colorful collective space.

Figure 1. *The Chicago Model, Proposal for Collective Living (Homage to Sir John Soane):* Chicago Architecture Biennial, Chicago, Illinois. Office Kovacs (2017).

1 Jean Baudrillard, ***Simulacra and Simulation,*** Translated by Sheila Faria Glaser. (Ann Arbor, MI: University of Michigan Press, 1994), 1. Baudrillard defined the hyperreal as "the generation by models of a real without origin or reality."

Sir John Soane is one of architecture's original mad scientists—a creator of otherworldly worlds and an extreme architectural collector. Soane's home, museum, and collection provided a conceptual architectural alibi, or framework, to collect material in the world and use it to shape a new, contemporary one. Through the construction of *The Chicago Model*, it turns Soane inside out: imagining interior as exterior, home scaled up to be a city, a space that is devoted to a collective instead of an individual. *The Chicago Model* imagines a collection of objects as being inhabited as opposed to just viewed. As an architectural model, the main formal operation of *The Chicago Model* is the manipulation of scale and quantity. Specifically, *The Chicago Model* is constructed from a large number of small everyday objects that have been collected and manipulated such that each object's size is altered. The alteration of each object is amplified through the addition and aggregation of additional objects. This plays upon notions of hyperreality in that each object collected is an actual object, with an actual function, in the actual world. In the case of *The Chicago Model* these objects have been altered through model making with the intent of imagining each collected object as a component of a larger architectural conglomerate. In other words, the parts of *The Chicago Model* consist of a number of singular wholes that have been altered and added to form a new totality, or a Superobject (see Figure 2).

Figure 2. *Life of a Model:* Film Stills. Phil Donohue (2017).

The life of *The Chicago Model* began in Los Angeles, California, in 2017. *The Chicago Model* was constructed over three months with three people continuously adding to the assembly of the model. The model was produced in a "freestyle" manner, almost like a game in which model makers each constructed fragments and chunks that were then added together to fill the invisible mass allotted by the parameters of the Chicago Architecture Biennial. Freestyle model making starts with a found object and alters it in some capacity to amplify its scale, form, mass, color, and literalness, along with other appealing architectural qualities, in a physical model form. This loose set of qualities, altered in construction, is the result of the hybridization of traditional architectural model-making techniques and physical 3D collage. The resulting composition of altered found objects is colorful, dense, and varied.

For *The Chicago Model*, freestyle model making consisted of using traditional architecture model-making techniques, such as cutting with a blade, measuring, gluing, assembling, and painting, with collecting and altering objects to produce new fragments that form the overall mass of the model. Interestingly, *The Chicago Model* further plays upon notions of hyperreality through its hybridization of techniques latent in traditional architectural model making, arts and crafts, HO scale train models, and the production of maquettes. As such, there is an equalizing of a variety of techniques that is reflected in the overall visual and conceptual representation of *The Chicago Model* as a proposal for collective living. Physical chunks and fragments are constructed by each model maker and assembled on the base of the model. These chunks eventually build up while other chunks and fragments are attached, until the allotted volume becomes full. Effectively conserving found objects through alteration in the model-making process, this method of model making brings the collected found objects a new life. This is amplified through the overall assembly of the mass of the model, which can also be thought of as a collection. A film produced by Phil Donohue documents the process of acquiring such a collection of found objects. The film follows the model makers into various stores as they collect useful material and eventually to the studio and through production and the construction of the model. The film demonstrates many of our model-making techniques, turning each model maker into an actor in their own *Truman Show* (1998)[2]. Donohue's film was titled *Life of a Model* and played on a loop on an LED screen that, once placed in the model, at scale, appeared like a massive jumbotron broadcasting to the residents of the model how their surroundings were constructed.

The Chicago Model was displayed in the Room of Plinths at the Chicago Architecture Biennial from September 16th, 2017, to January 7th, 2018. Afterwards, while not originally anticipated, the model was shipped from Chicago, Illinois, to the Shinkenchiku House in Tokyo, Japan. Also not originally anticipated were the complications that led *The Chicago Model* to arrive in unintended fragments, chunks, and small parts and pieces—when the shipping crate was opened in Tokyo, the model appeared wrecked. The editorial staff at *a+u Architecture and Urbanism Magazine* meticulously unpacked and documented all the parts that arrived in the crate (see Figure 3). Viewing the images afar in Los Angeles, the sensation for the model makers was similar to viewing images of an airplane crash investigation site. *The Chicago Model* had been constructed out of thousands of pieces and it was clear that the life of *The Chicago Model* was in a precarious situation. Despite a plan being hatched to reconstruct and repair, the precarity of the life of *The Chicago Model* was amplified as the Covid-19 pandemic raged and led to global lockdowns.

Reconstructing the Model

In 2022, with global travel restrictions easing, a new plan was made to repair the model. In the second half of July 2022, the plan was carried out and *The Chicago Model* was repaired and reconstructed to its original state at the Sekisui House–Kuma Lab at the University of Tokyo (see Figure 4). When taken fully out of the crate in Tokyo, the model was revealed to be in chunks and fragments. Some fragments were still attached to the base, but almost all fragments were unattached. In addition, there were many small loose pieces and parts. Some of these parts consisted of scale figures and landscape model parts, but other parts belonged to other compositions in the model. Almost no singular found objects were badly damaged or broken beyond repair.

At the time of the original construction of the model, no drawings were produced. The model itself, through its freestyle model production, demanded new forms of representation that consisted of the film, hundreds of photographs, and 2D scans of parts on a book scanner. The photographs of the

2 *The Truman Show*, directed by Peter Weir (Hollywood, CA: Paramount Pictures, 1998).

Figure 3. Individual components of *The Chicago Model*. Editorial staff of a+u Architecture and Urbanism Magazine (2017).

Figure 4. *The Chicago Model, Proposal for Collective Living II (Homage to Sir John Soane):* Reconstructed at the University of Tokyo, Tokyo, Japan. Office Kovacs (2022).

model in Los Angeles and Chicago became integral to the reconstruction of the model in Tokyo. It was these photos that allowed us to be detectives and reconstruct the model to its original state. Additional repairs included paint touch ups and re-leveling. Only a small handful of pieces that arrived in the crate were not located on the model during the reconstruction. While at the University of Tokyo the model was 3D- scanned by Toshiki Hirano (see Figure 5). After the model was reconstructed at the university, it was transported to the Shinkenchiku Shodoshima House on Shodoshima Island (see Figure 6). *The Chicago Model* was displayed as part of the Setouchi Triennial, re-igniting the model's relationship to Soane in a new way.

Figure 5. *The Chicago Model*: 3D Scan, chicagomodel_turntable01.GIF. Toshiki Hirano (2022).

The Shinkenchiku Shodoshima House is a beautiful rehabilitation of an abandoned house. Architects Taichi Sunayama and Toshikatsu Kiuchi have deployed a strategy of microarchitectural incisions. The incisions reveal and celebrate moments of the traditional aesthetic latent in the house with additions and alterations of a refined contemporary sensibility, which creates a new symbiotic relationship between history and attitudes towards a contemporary present. The Shinkenchiku Shodoshima House, like Soane's house, becomes a contemporary location of architecture practice and an exhibition space, and it amplifies the house as a museum and laboratory for architecture experimentation.

The life of *The Chicago Model* continues in this context of amplification and experimentation. At the same time, the exhibition setting at the Shodoshima House and the efforts involved in the reconstruction of *The Chicago Model* reveal how the work, even after its seeming destruction, can live on in a contemporary present. In architecture, a model is uniquely different from other representational tools available to architects. Through its physical three-dimensionality, architectural models not only communicate a totality of information, but they also allow everyday viewers a way to grasp architectural concepts that might otherwise not be as accessible in a drawing or a rendering. *The Chicago Model* willingly and playfully taps into the reality of our hyperreality through the construction of an architectural model and the subsequent forms of representation of the model in its construction, destruction, reconstruction, and display. The production of the model itself and its freestyle technique in altering found objects, though aggregated and dense, creates instantly recognizable formal references for viewers. This familiarity of forms is multiplied through different types of representation that document the model in various states and through different media, such as photographs, 2D scans of collections, films, social media posts, zine publications, articles, 3D scans, and the context of different exhibition venues. *The Chicago Model* deliberately exploits the medium of the architectural model to collect existing material in the world, and it alters and assembles that material to present a new model of how we might shape our world. *The Chicago Model* has had a unique life story; as a conceptual model, it is an architecture proposal that references the house, museum, and collection of Sir John Soane and proposes an architecture that is between the individual and public, the present and history, through the construction of a model of found objects.

Figure 6. *The Chicago Model, Proposal for Collective Living II (Homage to Sir John Soane)*: Shodoshima House, Shodoshima Island, Japan. Phil Donohue (2022).

Bibliography

Baudrillard, Jean. *Simulacra and Simulation*. Translated by Sheila Faria Glaser. Ann Arbor, MI: University of Michigan Press, 1994.

Weir, Peter, dir. *The Truman Show*. 1998; Hollywood, CA: Paramount Pictures.

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If you are reading the ***Post-Screen*** book, please go to page 142

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a purple architecture

Design in the Age of the Physical-Virtual Continuum

Perry Kulper

Architectural Projects

Showing up in

[redacted]

Spatio-Visual
Regimes
Pictorial

Post-Screen
Chunks

Existential
Scenarios
Human-Human

Birds of Kyoto
Aerial Diptych Follies

Has been discussed in essays by

Marta Nowak
Kelly Bair
Ayad Rahmani

Designed by Studio EP
using MidJourney, and Runway

September 30th, 2023,
09:23 pm

Employing the keywords:
[staged], [set design], accessories, architecture set, ambiguity, narrative, heterogeneity, composition, graphic design, crisis of reduction, evidence, surrealism, [on white background]

Birds of Kyoto

Aerial Diptych Follies

Perry KULPER

Birds of Kyoto

If architecture is static and often predicts our spatial experiences, a purple architecture offers the possibility of fusing worlds, mixing temporalities, indulging in the pleasure of split-geographies, and challenging our routines. This approach opens the possibility for transient sojourns by amplifying and making vivid the betwixt, while foregrounding myriad options into deeper human, and nonhuman, potential. *Birds of Kyoto* trades, lightly, on some of these horizons, suggesting the possibility of mixing worlds, staging partial evidence, and framing ambiguous realms, all towards a slightly enlarged cultural imaginary.

Increasingly, and perhaps arguably, the realms of architecture, and our daily practices in spatial settings, are motivated by certainty, deep predictability (as structured by the program, and by varied performance criteria). They are also foregrounded by things like regulatory strictures, profit margins, and environmental qualifications. A devil's advocate could say that the instrumentalization of culture has stripped architecture bare of communicative transience.

Birds of Kyoto suggests the possibility of augmenting schematic design approaches that might foreground, directly, schematic experiences, while trying to augment homogenous thinking and the crisis of reduction. It advocates for increased audience range, breaking with binary logics, and overcoming things like age-old and tired, figure-ground thinking. Rather, it chases heterogeneous interests over homogeneous limits, capitalizing on slippages, drifts, and uneven edges, inspired by a range of art practices, cinematic techniques, and conceptual shenanigans.

Tickling, just a bit, spatial and film references like Lars von Trier's film *Dogville* (2003)[1] and his framing of *The Five Obstructions*, with Jørgen Leth (2003)[2]; Luigi Pirandello's play *Six Characters in Search of an Author* (1921)[3]; and Tom Tykwer's film *Run Lola Run* (1998)[4] as analogic accomplices, alongside key surrealist tactics (familiar strangeness, the juxtaposition of distant realities, and paradoxical illusion), *Birds of Kyoto* advocates for aspirational working techniques that trade on composites, collage, and even hybridization—enabling metaphorical gene-splicing, cross breeds, and critical fragments to tickle the broader thematic concerns of this book.

Borrowing Robert Venturi's (1977) framing of ambiguity, "both and" and "the difficult whole," in his seminal book, *Complexity and Contradiction in Architecture*,[5] in *Birds of Kyoto* there also exists a belief in the potential of evidentiary clues, metaphorical ghosts and curiosity cabinets, corroborating a relational loom that coaxes the betwixt, teasing out liminal experiential capacity diagrammatically, representationally, and spatially. Ambiguity, thought about structurally, in combination with some cinematic relations (let's say operationally) will build momentum for a set of scenes, to chase cinematic contributions, to the betwixt; provocative, these are tangled and maybe even essential in an age stripped of experiential transience.

Framed in the guise of actors, actions, and arenas (let's say situations), this work lightly touches on narrative constructions, capable of communicative potential, structured temporally, while constantly vibrating, fluctuating, and evacuating the scenes. Fluidity, multiple relational diagrams of operation within spatial settings, and indeterminacy populate the margins.

Germinal seeds for *Birds of Kyoto* are owed, peripherally, to Umberto Eco's seminal book, *The Open Work*[6]—foregrounding the artist's decision to leave arrangements of parts of a work to public interpretation, or chance, and for his framing of multiplicity and plurality in art, coupled with his advocacy for a response as an active construction between reader and text; with a nod to Roland Barthes,[7] Michel Foucault,[8] and Marcel Duchamp;[9] to Peter Galison's framing of "critical opalescence" in *Einstein's Clocks, Poincaré's Maps: Empires of Time*[10]—when a substance reflects not one wavelength of light, but all wavelengths of light, enabling the reconceptualization of time, reflected at all scales; and importantly to Wallace Stevens's poem *Thirteen Ways of Looking at Blackbird*[11]—in which he sets out thirteen stanzas about "a" blackbird but never touches the blackbird, literally or descriptively. Rather, he builds an implicit field of evidence, a kind of cinematic pan of thirteen metaphorical props, enabling the readers to construct their own frames of reference for articulating "a" blackbird. Or not. Lots of betweens here. In fact, only betweenness. Things like varied points of view, shots, flashbacks, bridging, cross-cutting, the dissolve, and jump cuts surf behind the scenes, to upload interstices, and their possible affordances, spatially and representationally.

[redacted]

1 *Dogville*, directed by Lars Von Trier (Denmark: Nordisk Film , 2003).

2 *The Five Obstructions*, directed by Lars Von Trier (Denmark: Zentropa Real ApS, 2003).

3 Luigi Pirandello, *Six Characters in Search of an Author and Other Plays*, trans. Mark Mura. (New York: Penguin Modern Classics, 1996).

4 *Run Lola Run*, directed by Tom Tykwer (Germany: Prokino Filmverleih, 1998).

5 Robert Venturi, *Complexity and Contradiction in Architecture* (New York: The Museum of Modern Art, 1977), 27–29, 30–37, 89–103.

6 Umberto Eco, *The Open Work*, trans. Anna Cancogni (Cambridge, MA: Harvard University Press, 1989).

7 Roland Barthes, "The Death of an Author," in *Image-Music-Text*, trans. Stephen Heath (London: Flamingo, 1977), 142–48.

8 Michel Foucault, "What is an Author?" in *The Foucault Reader*, ed. Paul Rabinow (London: Penguin, 1991), 101–20.

9 Marcel Duchamp, "The Creative Act," 1957, Surrealism Reviewed: Original Recordings by Breton, Duchamp, Aragon, Dall, Desnos, Ernst, Penrose, Soupault, Tzara, Man Ray and Miller, accessed September 12, 2020, https://www.openculture.com/2015/10/hear-marcel-duchamp-read-the-creative-act.html.

10 Peter Galison, *Einstein's Clocks, Poincaré's Maps: Empires of Time* (New York: W.W. Norton & Company, 2003) 26–40.

11 Wallace Stevens, *Thirteen Ways of Looking at Blackbird*, ill. by Corinne Jones (Nacogdoches, TX: Stephen F. Austin University Press, 2014).

Aerial Diptych Follies

Manifesting from the investigations of *Birds of Kyoto* is a body of work titled *Aerial Diptych Follies*. The original analogical drawings for three *Aerial Diptych Follies* trade on a surrealist-inspired form of nonhuman theatre, a kind of cinematic sky-bound setup, where imagined stories and histories, perhaps hundreds of years apart, are enacted by fictional, two-part didactic instruments—nonsensical, and seemingly purposeless, objects (see Figure 1). Follies as it were, scheming and masquerading, as aerial acrobats. A kind of floating circus. Developed through likenesses, or analogically, these flying objects are aware of relations to others but are simultaneously unhinged from a collaborative endeavor. In conversations, they conjure myriad combinations of significantly different worlds—a kind of surrealist game: the juxtaposition of distant realities, brokered into plausible but quasi-indecipherable aerial events. They pry open the imaginative potential of the object-instruments, and the sky and horizon-oriented events to which they refer—and might falsely (re)construct—aerially.

Figure 1. *Aerial Diptych Folly, v.01*. Perry Kulper (2018).

In the second phase, the three *Aerial Diptych Follies* pursue what might be possible by interrogating imaging and digital modeling practices, more likely possible in cinematic worlds, perhaps uncommon in architectural realms—getting behind the scenes, literally and figuratively. In addition to the image/digital modeling conversations, each of the three has its own ambitions: *Aerial Diptych Folly, v.01* establishes a kind of staged, theater-like setup (see Figure 2); *Aerial Diptych Folly, v.02* constructs an inflected world around the setup (see Figure 3); and *Aerial Diptych Folly, v.03* facilitates the possibility of several devices for measure (see Figure 4).

Key motivations for this work include the nuanced interplay of three-dimensional (3D) modeling toward the production of an image, while gaming with the lack of depth in the original analogical drawings. Pleasurably, a range of things were discovered in the process of

Figure 2. *Aerial Diptych Folly, v.01:* Lighting the Set. Perry Kulper in collaboration with Oliver Popadich (2018).

working: shadow and light became configurable in the space of rendering and became important in the manipulation of two-dimensional (2D) imagery; and light sources could negate shading and shadow effects, rather appearing as "flat" objects, transforming them into kinds of notational markings that affect the compositional geometry of the overall setup.

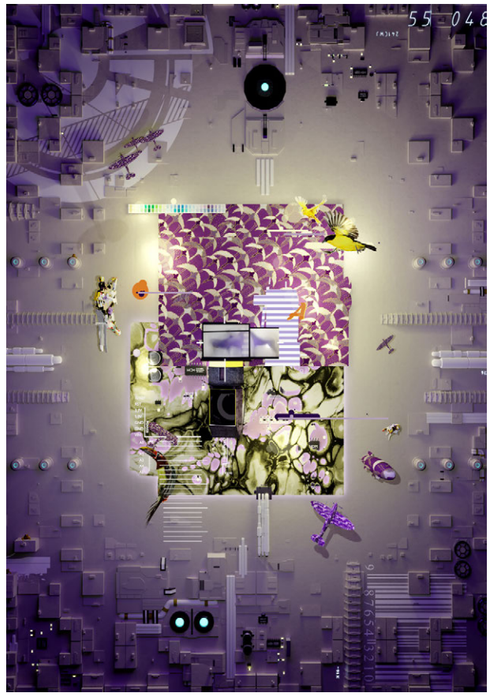

Figure 3. *Aerial Diptych Folly, v.02:* Oculus, Frontal. Perry Kulper in collaboration with Oliver Popadich (2018).

Figure 4. *Aerial Diptych Folly, v.03:* Frontal. Perry Kulper in collaboration with Oliver Popadich (2018).

Akin to the world of film, but visualized here in digital modeling space, shadows can be turned off or altogether transformed, collapsing the apparent depth of space, while complexifying relationships or producing novel effects, such as shadowed lighting. Similarly, texture and image mapping can evacuate, or (re)define, our understanding of the 2D image or 3D space—this can be seen in a projection of a cockatoo onto a scorpion or the unwrapping of a space shuttle surface with discontinuous patterning. Finally, these effects play out from a single privileged viewpoint; utilizing the three-dimensionality of the model allows the creation of new 2D imagery, akin to filmic techniques, where these effects collapse, or are redefined, to produce a layered spatiality, completely masked by the original view.

Parenthetically, the images are coupled with other thoughts, using language folds and particular situations, in which the scenarios to which they portend, might be staged, thus provoking multiple senses about what might be at stake in the work. This coupling produces augmented and secondary narratives through which the follies might be negotiated. Stories told, and others discovered and co-constructed, opening a rabbit's hole of narratives, simultaneously grounded, and yet untold.

When the Cows Come Home

The writing and visual examples of this work attempt to augment schematic, and perhaps reductive, approaches to design, advocating for things between foreground, background, and no ground. This, with the hope of producing varied speeds of engagement, granularities, and resolution, while conjuring multiple ways in, some ways out, and no way home. Established through characters, relational assemblies, tone, and situatedness, the affordances of mini-cosmologies prompt a cultural imaginary, lulled into a deep sleep through the systematization of culture. Film, theatre-like realms, and learning from each at the levels of their diagrammatic constructions, tone, techniques, and subject matter has helped frame this work, and in some cases, was present in the design of the project. Ultimately, there is a belief in mixed worlds, generated through multiple strategies, to enable creative participation with a world, or worlds, attempting to augment homogenous and schematic forms of thinking and design—rather, offering states of ambiguity, and emergent relational assemblies, toward animating transient states—the between, and betwixt—reframing what is known, prompting other cultural imaginaries.

Bibliography

Barthes, Roland. "The Death of an Author." In *Image-Music-Text*. Translated by Stephen Heath. New York: Hill & Wang, 1978.

Duchamp, Marcel. "The Creative Act." 1957. Read by the author. Surrealism Reviewed: Original Recordings by Breton, Duchamp, Aragon, Dall, Desnos, Ernst, Penrose, Soupault, Tzara, Man Ray and Miller. Accessed September 12, 2020. https://www.openculture.com/2015/10/hear-marcel-duchamp-read-the-creative-act.html.

Eco, Umberto. *The Open Work*. Translated by Anna Cancogni. Cambridge, MA: Harvard University Press, 1989.

Foucault, Michel. "What is an Author?" In *The Foucault Reader*. Edited by Paul Rabinow. London: Penguin, 1991.

Galison, Peter. *Einstein's Clocks, Poincaré's Maps: Empires of Time*. New York: W.W. Norton & Company, 2003.

Pirandello, Luigi. *Six Characters in Search of an Author and Other Plays*. Translated by Mark Mura. New York: Penguin Modern Classics, 1996.

Stevens, Wallace. *Thirteen Ways of Looking at Blackbird*. Illustrations by Corinne Jones. Nacogdoches, TX: Stephen F. Austin University Press, 2014.

Tykwer, Tom, dir. *Run Lola Run*. Germany: Prokino Filmverleih, 1998.

Venturi, Robert. *Complexity and Contradiction in Architecture*. New York: The Museum of Modern Art, 1977.

Von Trier, Lars, dir. *Dogville*. Denmark: Nordisk Film, 2003.

Von Trier, Lars, dir. *Five Obstructions*. Denmark: Zentropa Real ApS, 2003.

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A Purple Architecture

Design in the Age
of the Physical-Virtual
Continuum

Rachael McCall

A Project

Showing up in

[redacted]

Spatio-Visual Regimes Pictorial

Post-Screen Worlds

Existential Scenarios Human-Data

Filtered and Fuzzy

The Cinematic Enmeshing of Architecture and Film

Has been discussed in essays by

Marta Nowak
Natasha Sandmeier
Frank Melendez

Designed by Studio EP using MidJourney, and Runway

September 30th, 2023, 02:41 pm

Employing the keywords: [staged], [set design], wildflowers, cinematic, perception, effect, interstitial, motion, sequence, scene, filter, [on white background]

Filtered and Fuzzy

The Cinematic Enmeshing of Architecture and Film

Rachael McCALL

Mixed Media

Architects are taught to think cinematically, constantly flipping between the imagined and the real. Form, figure, and spatial experience are inextricably linked, jumping back and forth between two-dimensional, three-dimensional, virtual, augmented, and mixed realities. Previously parallel universes of film and architecture are now tied together in how many digital and post-digital architects practice, represent, and theorize their work. Film offers architecture a medium where nearly all forms of work and worlds can coexist, providing a fuzzy, borderless gray zone between representation and reality.

Film promises architects an alluring distraction from the banality of hard lines and flat surfaces. When working cinematically, thin lines and hard edges are disintegrated. Their legibility is shifted into the realm of thick, painterly brush strokes through camera movements, visual effects, and motion graphics. Spaces of careful curation, direction, and production that have always been revered in the two-dimensional representation of architecture are also offered in pre-production, editing, and post-production of film.

Politics of Perception

Film subverts the politics of the subject and viewer. Views are controlled by the camera; therefore, the audience only gets access to certain views in a carefully choreographed sequence. Using cinematic techniques, there is a perpetual sense of in-between space, an air of mystery, fantasy, and defamiliarization. With the camera being controlled by the author, the audience is no longer in charge of how and when they view the project. Viewers are lured and locked in an in-between state, unable to reorient themselves or control the way they are positioned in relation to the work. Camera paths crop views and adjust the speed at which one views the project. Swift transitions between shots eliminate space and jump between scenes, destabilizing the viewer, actively omitting large swaths of the project. Although destabilizing and out of the control of the viewer, these techniques add to the allure and mystery of the work, firmly gripping the audience in a curated sequence.

Cinematic expressions lead the viewer to "focus on images of things that are incomprehensibly vast, or unimaginably small, or frighteningly blank, dark, smeared, pixilated, or otherwise illegible."[1] This positions the viewer in the realm of liminal space—a threshold between the real and imagined—slightly abandoned, partially frozen, and unsettling. David Nye describes this unsettling state as "repeated experiences of awe and wonder, tinged with an element of terror, which people have had when confronted with particular natural sites, architectural forms, and technological achievements. This is about the social construction of certain powerful experiences in industrial society, which is to say it is about the politics of perception."[2]

1 James Elkins, *Beyond the Finite: The Sublime in Art and Science* (New York: Oxford University Press, 2011), 79.

2 David Nye, *American Technological Sublime* (Cambridge: The MIT Press, 1994), vxi.

Just as the creative passion and wildness of the picturesque developed alongside the scientific rigor of the Enlightenment, film provides architects with an outlet, contrasting the everyday banality of straight lines, sharp corners, and calculated details. Film allows architects to build in elements of fiction, spectacle, awe, and surprise. As opposed to heavy, vector-based drawing sets, film brings an added syncopation to the pixel—architecture no longer must be stable but can instead filter, flicker, fizzle out, and add an extra layer of fuzz.

Figure 1. *Wildflowers*: Tulip stems with wandering pixilation. Rachael McCall (2020).

Wildflowers

Flickering between static renders, animated clips, and paused liquid simulations, this series of *Wildflowers* takes on the contemporary tension between real-time rendering, film, and gaming simulation compared to slower, mixed CPU- and GPU-based renders (see Figure 1). Each image overlays four to six renders of varying speeds and resolutions, then it selectively erases zones to flicker between high resolution, excruciatingly slow sub-surface skin renders and high-speed, almost instantaneous pixelated, low-resolution, and glossy renders.

The bingeful fun of having superfluous geometry and excessively slow-to-render materials (such as skin shaders with subsurface scattering, blended with satin rose gold metallic materials) are contrasted with fast, low-sample pixelated renders. Fast-rendering materials are contrasted with slower layered shaders, giving equal aesthetic weight to a 0.4-second render and a 4-hour render. *Wildflowers* is a total polycount-versus-render-time binge, in full support of overindulgence wherever possible (see Figure 2).

With gold-dipped edges and wandering pixelation, this series of flowers inflates, puffs, and rips open a delicate tulip. A usually paper-thin tulip is inflated and swollen at the edges, then broken to reveal multiple layers and scalloped scars. The form plays between skin and fat, synthetic and real. These images capture paused moments in a fluid simulation, tearing apart a digital tulip. The simulation was cached, previewed, and scrubbed through in stop motion to extract and curate moments where the form was mid-simulation in three dimensions (see Figure 3).

Wildflowers II takes on the question of faux and synthetic materials versus natural and organic products (see Figure 4). Delicate metallic flowers are wrapped and encrusted in faux brown leather and inflated pink concrete petals. A thin rose gold metallic edge strip traces the exterior profile of selected scalloped

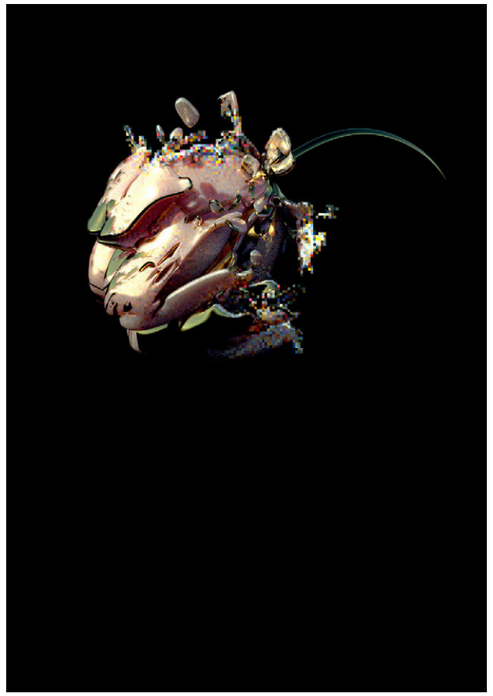

Figure 2. *Wildflowers*: Pixelated verses scalloped and gold-dipped edges. Rachael McCall (2020).

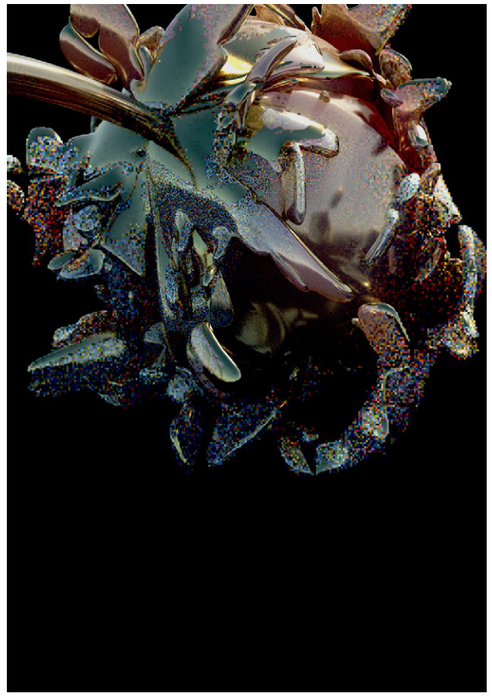

Figure 3. *Wildflowers*: Rose gold metallic flesh. Rachael McCall (2020).

petals, like fine ink outline on vellum drawings of the past. The torn mesh tulips are bundled together, draped using gravity simulations, and paused moments before the meshes disintegrate completely (see Figure 5).

This project captures and edits a cinematic moment, mid-simulation—a flicker and a flash in a longer sequence—commenting on the fuzzy relationship between architecture and film and the blurry boundary between real-time renders and excessively curated visual content.

Flickering and Flashing

Film encourages unexpected moments, the chance to flicker or bump into or cut directly between scenes. The possibilities of lighting, altered coloration, blur, and reflections are heightened and gain more weight in a designer's palette when working with film, instead of being forced to include "moments of orthographic stabilization"[3] typical of other architectural representational mediums, such as cutting flat plans and sections or bookmarking hero views for a series of renders.

3 Stan Allen, "Thinking in Models," *Log 50 Model Behavior*, no. 50 (Fall 2020): 20.

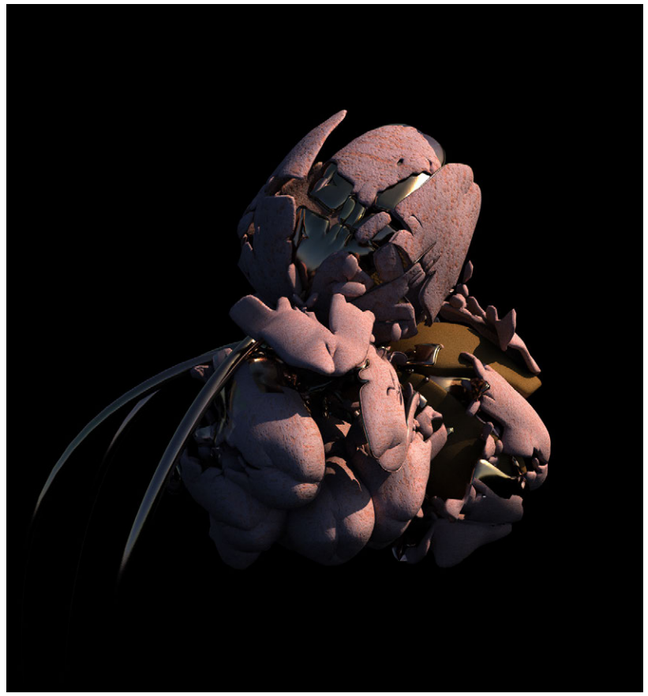

Figure 4. *Wildflowers II*: Puffed popcorn tulips with bronze studs and faux leather buds. Rachael McCall (2021).

In comparison to working with a typical flat drawing set where the goal is to explain every elevation and to detail each moment in a building, when designing architecture to be represented using film or animation, one does not have to work on all sides of the model. As noted by Lisa Le Feuvre, Ian Kiaer eloquently explains, "The model could hold multiple associations and also remain unknowable. It could just be a very particular form that is impossible to describe, or a piece of material that stands in, or acts as a foil for something else. The model is both evasive and ridiculously precise."[4] Cards and proxies stand in as duplicates, saving bytes of memory for distribution across the scene in moments of intense detail, intricate design, and graphics-processor-zapping render power. As Teresa Stoppani describes, both digital and physical models are "charged with the potentiality of producing otherness." Stoppani continues, "The model can never be finished and remains active also when it appears complete."[5] This otherness in film is what is not shown, what is not explained or modeled, or it is something that is cropped out. It can be the darkness, flicker, or semi-finished model that is never fully shown or realized.

In film, a building becomes a set. It can be half-complete, provided the camera does not see the unfinished side. Materials can be misconstrued, over scaled, and applied with three to five clicks. What is heavy, thick, and expensive in reality becomes paper thin, seamless, stretched, and warpped along adjustable axes. The boundlessness of virtual space and an endless scene leaves openness and freedom for designers. However, the harsh clipping plane of the film gate carefully crops and curates a fictional narrative. The audience no longer gets to choose their perspective, adjust their peripheral vision, or focus their gaze. Black bars descend, and the designer has complete control and the possibility to convert a standard 16:9 image to a zoomed-in macro shot or switch to an ultrawide aspect ratio (21:9), widening the viewer's horizon. Although in control of their imagination, continuously interacting and

4 Lisa Le Feuvre, *Ian Kiaer: Tooth House* (Leeds, UK: The Henry Moore Foundation, 2014), 14.

5 Teresa Stoppani, *Unorthodox Ways to Think the City: Representations, Constructions, Dynamics* (Oxfordshire, UK: Routledge, 2019), 108.

projecting possible outcomes, the audience is completely controlled by the camera, whether it be a drone, handheld, or rigged. Unlike when one steps around objects in a gallery or circles around a building on the sidewalk, the director precisely controls the perspective, angle, depth field, and cut of the shot. For the audience, the interstitial space lies in what is left out of view. Moments implied by the narrative add fuzz and get filtered by the viewer's personal experiences. The power of inference opens the audience to buy into the narrative and alter their reading of the work.

Film has a "transitory presence,"[6] meaning it takes the viewer into a trance-like temporary state, momentarily pausing reality and letting the viewer occupy an alternative world. It flickers, flashes, and is unstable compared to other forms of representation in architecture where one has a more "one-to-one"[7] relationship with the object. This fleeting presence transports both the viewer and the author into a zone between representation and imagination. Architecture and film together engender new possibilities and readings, outside what may be modeled or set up in the scene. Film provokes a sense of freedom and liberation for both the viewer and the designer. This freedom is part of the allure for many architects and students, inviting the possibility to explore and provoke outside of more finite mediums.

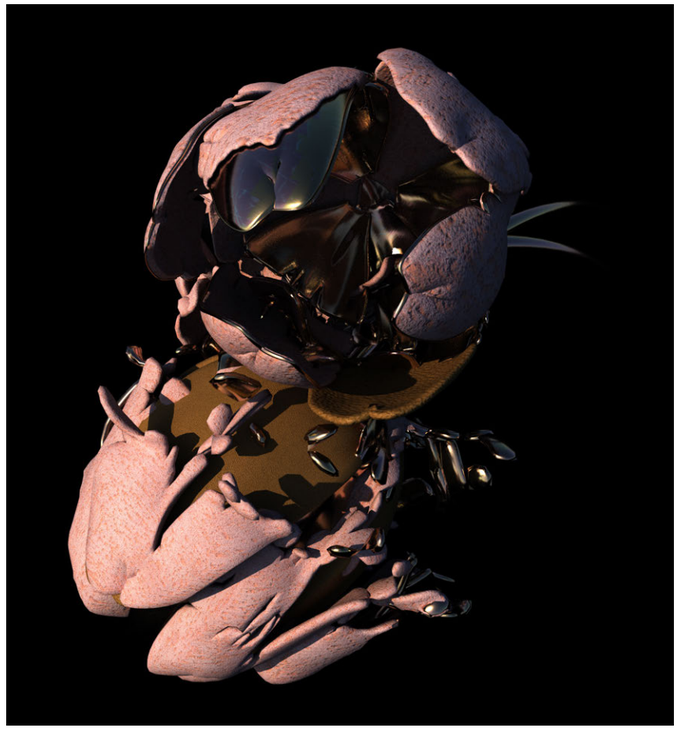

Figure 5. *Wildflowers II*: Hollow bronze crackled interiors. Rachael McCall (2021).

6 Teresa Stoppani, *Unorthodox Ways to Think the City: Representations, Constructions, Dynamics* (Oxfordshire, UK: Routledge, 2019), 108.

7 Ibid.

Bibliography

Allen, Stan. "Thinking in Models." *Log 50 Model Behavior*, no. 50 (Fall 2020): 18–28.
Elkins, James. *Beyond the Finite: The Sublime in Art and Science*. New York: Oxford University Press, 2011.
Le Feuvre, Lisa. *Ian Kiaer: Tooth House*. Leeds, UK: The Henry Moore Foundation, 2014.
Nye, David. *American Technological Sublime*. Cambridge, MA: The MIT Press, 1994.
Stoppani, Teresa. *Unorthodox Ways to Think the City: Representations, Constructions, Dynamics*. Oxfordshire, UK: Routledge, 2019.

If you are reading the ***Spatio-Visual Regimes*** book, please go to page **66**

If you are reading the ***Post-Screen*** book, please go to page **264**

If you are reading the ***Existential Scenarios*** book, please go to page **94**

Please scan the QR code for the augmented reality (AR) experience.

Ebrahim Poustinchi &
James F. Kerestes

A Project

Showing up in

[redacted]

Spatio-Visual
Regimes
Metavirtual

Post-Screen
Systems

Existential
Scenarios
Human-Machine

The Secret Life of the Ring

A Purple Cyber-Physical Performance

Designed by Studio EP using MidJourney, and Runway

September 29th, 2023, 03:56 pm

Employing the keywords: [staged], [set design], architecture, augmented reality, AR, VR, XR, cyber-physical, worldbuilding, interface design, graphic design, pop culture, stage, [on white background]

Has been discussed in essays by

Ryan Scavnicky
Janice Shimizu
Marjan Colletti

The Secret Life of the Ring

A Purple Cyber-Physical Performance

Ebrahim POUSTINCHI, James F. KERESTES

Revealing Purple Environments

The physical environment has a secret! A secret life that has always been there holding memories of past, current, and future performances; parallel realities full of human and non-human creatures, plants, balloons, and monsters. All that is needed to unlock this wonderland is a rabbit hole and a sense of adventure. *The Secret Life of the Ring* reveals as much as possible of these worlds through hybridizing actual and virtual existences. It is a frozen slice of a multi-reality mixture slowly defrosting through environmental, performative, or cyber-physical interactions. They are there, believe in them, and you will slowly start to see them!

The Secret Life of the Ring is an exterior, public performance space and a real-time interactive cyber-physical installation that allows users to engage their surroundings in new ways, enabling them to participate in shaping that experience with more agency. The project consists of a dynamic, physical installation and a real-time virtual interface that creates a "portal" for cultural exchange through interactive worldbuilding and storytelling. The physical components consist of a series of multi-scaled stages and platforms, or rings, with the intent of integrating and blurring the difference between spectator and performer (see Figure 1). There is a buffet of rings huddled together in a single location anchored by a prominent circular stage. Radiating from this focal point are several additional platforms for performers and audience members to inhabit. This dynamic arrangement of reconfiguring rings provides flexibility to accommodate a range of different types and scales of performances. It also provides performers the freedom and ability to move and engage areas outside of the main stage or ring.

Figure 1. Comprehensive view of the physical installation. Ebrahim Poustinchi and James F. Kerestes (2020).

There are large rings and small rings, rings within rings, rings on poles, "real" rings, and virtual rings—and everything in between—to help initiate and reveal the multi-reality worlds. Resting on and around the rings are several physical pet-like creatures. These blobby figures and inflatable animals like to be climbed on, leaned against, moved around, rolled over, and play during performances (see Figure 2). They hint on the "secret life of the rings" and anchor its presence in physical reality. In addition to the physical pet-like creatures, the audience members will be able to see and play with their virtual twins too. To enable the audience to participate and author each performance's experience/narrative, visitors have access to augmented reality (AR) filters on their cellphones through an accessible and easy-to-use application (see Figure 3). To connect the physical and virtual experiences, these filters are triggered by pointing cellphone camera's at physical trackers—lollipops in the ring—or independently triggered by the user as floating objects. Activated filters reveal virtual twins of the surrounding creatures, pets, and much more, inhabiting the rings in parallel realities! People have the freedom to scale, position, and move around with their newly found virtual friends. Whether resting in the palm of their hand or towering over the site, these virtual creature friends are anxious to share sneak peeks from the parallel worlds in the area.

Figure 2. Detailed view of the creatures and pets of the physical installation. Ebrahim Poustinchi and James F. Kerestes (2020).

Figure 3. Example of the augmented reality filters activated on a user's cellphone via an easy-to-use application. Ebrahim Poustinchi and James F. Kerestes (2020).

Activating Purple Performances

The Secret Life of the Ring proposes a number of scenarios aimed at activating multiple sites in the surrounding area with both physical and virtual objects. The augmented reality filters allow users to take their virtual pets for a walk through the screens of their phones. Additionally, some of the individual platforms, blobs, and inflatables can be picked up and relocated for smaller performances or for performances that require a different context (see Figure 4). Even the augmented reality physical trackers, or lollipops, can be carried to alternate locations to see what additional creatures are hiding in the area.

Through these series of actual/physical and virtual interactions, *The Secret Life of the Ring* not only blurs the boundaries between the performers and the audience but also creates a synthesized performance that is timeless and space-less. In addition to physically experiencing the performances being performed in the main or "real" ring, the audience can narrate, curate, and customize their own version of the same performance through the AR cellphone application and within the virtual world. Users operate custom-made AR content that is updating regularly based on events (see Figure 5). Being able to add virtual static and animated content, filters and tags, and record them through the AR cellphone application, each audience member can "direct" and narrate new versions of performances, beyond the physical site. The ring not only expands beyond its footprint through physical mobility, but also moves beyond its medium and travels through time and location tunnels via virtual augmentation and storytelling.

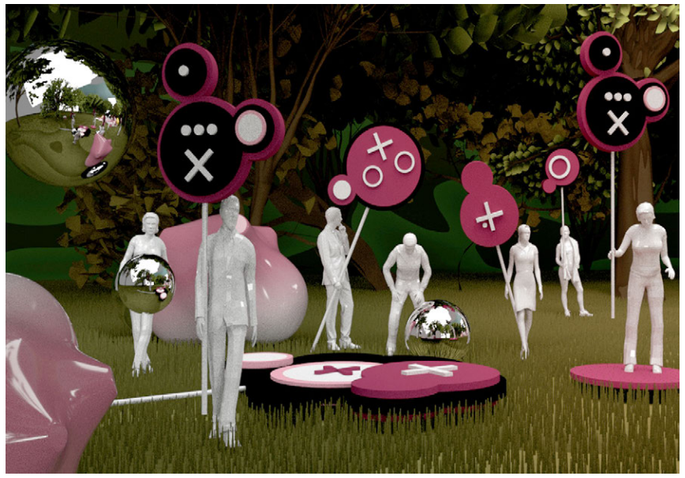

Figure 4. Scenario where users engage multiple sites by moving the physical objects. Ebrahim Poustinchi and James F. Kerestes (2020).

Figure 5. Example of user's utilizing custom-made AR content on their personal devices. Ebrahim Poustinchi and James F. Kerestes (2020).

The Secret Life of the Ring sees mobility as a crucial element for discovery and worldbuilding by revealing and engaging unseen virtual universes with all of its inhabitants, unlocking stories and narratives, and providing a comparative context in which to view the physical environment of the site. Mobility can take the form of a parade where the physical trackers, or lollipops, stake a claim in new horizons through the hands of the marchers. A parade where the boundaries between performer, audience, scene accessories, real, fake, actual, virtual, creature, and creator, blend into one. A personal experience for each of the participants: a purple spectrum.

Figure 6. Aerial view of the overall design proposal. Ebrahim Poustinchi and James F. Kerestes (2020).

Alternate realities, fanciful worlds, and in-depth storytelling is the foundation of *The Secret Life of the Ring* project (see Figure 6). It employs novel, contemporary mediums and platforms to propose a new reading for their love of performance, interaction, storytelling, and art. To build new memories and stories to tell friends and family back home, performers are provided with more freedom to engage their narratives and mediums of storytelling. It means recognizing opportunities everywhere: "real" or fairy-tale.

A Purple Architectural/Spatial Experience

> "Alice was beginning to get very tired of sitting by her sister on the bank, and having nothing to do. . ."[1]

Alice's adventure through wonderland was initiated by a desire to seek and explore new realities. Similarly, in *The Matrix* (1999),[2] Neo (Keanu Reeves) follows the white rabbit in order to learn more about the Matrix from the renowned hacker, Morpheus (Laurence Fishburne). *The Secret Life of the Ring*, utilizing a cyber-physical agenda, provides its audience with the agency to engage an enhanced reality as well, a blending of physical and virtual conditions. This "third other" or a spectrum of purple realities challenges the conventional biases of an architectural/spatial experience, where the design life of the project rests in the hands of the "designers" or audience. By moving away from the physical/virtual binary, *The Secret Life of the Ring* proposes a design, development, realization, and experience continuum where the project engages in a never-ending design/experience loop.

1 Lewis Carroll, *Alice's Adventures in Wonderland* (New York, NY and London, UK: Bloomsbury, 2001), 3.

2 *The Matrix* (1999), directors, Lana Wachowski and Lilly Wachowski.

Bibliography

Carroll, Lewis. *Alice's Adventures in Wonderland*. New York, NY and London, UK: Bloomsbury, 2001.
Wachowski, Lana and Wachowski, Lilly, directors. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.

If you are reading the ***Spatio-Visual Regimes*** book, please go to page 102

If you are reading the ***Post-Screen*** book, please go to page 290

If you are reading the ***Existential Scenarios*** book, please go to page 130

Andrew Saunders

A Regional Project

Showing up in

[redacted]

Spatio-Visual
Regimes
Spatial

Post-Screen
Chunks

Existential
Scenarios
Human-Data

Baroque Topologies

The Productive Futility of
1:1 Representation

Has been discussed in essays by

Dora Epstein Jones
Kelly Bair
Frank Melendez

Designed by Studio EP
using MidJourney, and Runway

October 1st, 2023,
01:22 pm

Employing the keywords:
[staged], [set design], baroque,
3d scanning, point cloud,
LiDAR, big data, layers,
representation, architecture, [on
white background]

Baroque Topologies

The Productive Futility of 1:1 Representation

Andrew SAUNDERS

Close Reading

> "That's another thing we've learned from your Nation," said Mein Herr, "map-making. But we've carried it much further than you. What do you consider the largest map that would be really useful?"
> "About six inches to the mile."
> "Only six inches!" exclaimed Mein Herr. "We very soon got to six yards to the mile. Then we tried a hundred yards to the mile. And then came the grandest idea of all! We actually made a map of the country, on the scale of a mile to the mile!"
> "Have you used it much?" I enquired.
> "It has never been spread out, yet," said Mein Herr: "the farmers objected: they said it would cover the whole country, and shut out the sunlight! So we now use the country itself, as its own map, and I assure you it does nearly as well. Now let me ask you another question. What is the smallest world you would care to inhabit?"[1]

Three unavoidable cautionary parables on simulacra offer insight into the inevitable impossibility and dangers of pursuing exact, nonreductive, one-to-one (1:1) representation. One is *On Exactitude in Science* by Jorge Luis Borges in which cartographers construct a map of a fictional empire "whose size was that of the Empire."[2] Another, by Lewis Carroll in Chapter XI of *Sylvie and Bruno Concluded*, portrays a similar ambition reflected on by the main character, Mein Herr, who tells the story of a nation that created a map "a mile to the mile" in scale.[3]

In both cases, the 1:1 representation of the real is the pinnacle of scientific achievement, a Tower of Babel of sorts. Both conclude in the futility of diminishing returns. Borges's map ends in "tattered ruins" through neglect, and Carroll's map project ends due to the farmers objecting to it being unfolded or spread out. The point is further hammered home by Umberto Eco's analysis of Borges's fable in *On the Impossibility of Drawing a Map of the Empire on a Scale of 1 to 1*, which culminates in three axioms:[4]

1. Every 1:1 map always reproduces the territory unfaithfully.
2. At the moment the map is realized, the empire becomes unreproducible.
3. Every 1:1 map of the empire decrees the end of the empire as such and therefore is the map of a territory that is not an empire.

1 Lewis Carroll and Harry Furniss, *Sylvie and Bruno Concluded* (New York: Macmillan, 1894), 169.

2 Jorge Luis Borges, *Collected Fictions*, trans. Andrew Hurley (New York: Viking, 1998), 325.

3 Lewis Carroll and Harry Furniss, *Sylvie and Bruno Concluded* (New York: Macmillan, 1894), 169.

4 Umberto Eco, *How to Travel with a Salmon & Other Essays*, trans. William Weaver (San Diego, CA: Harvest Books, 1995), 95–106.

The third fable is the movie *The Matrix* (1999)[5] (from which *Purple Architecture* draws its title), a recent and clearly derivative plot that argues the other end of the spectrum, which could have been titled alternately to Eco's analysis as "The Possibility of Drawing a Map of the Empire on a Scale of 1 to 1." The outcome is even more dystopic. The successful simulation—or successful 1:1 mapping of reality—of life in 1999 allows machines to enslave humankind and harvest their bioelectric power all while the humans' minds are comatose.

The moral of the stories seems to be that you are damned if you do and damned if you don't achieve perfect simulacra. So why try? Why even attempt total 1:1 representation? It may be a positivist end goal, but this is not where the value of the pursuit exists. Consider that the discipline of architecture is heavily tethered to the history of architectural representation. Epic, nonfictional totalizing cartographical pursuits of a similar nature to those in the fables have birthed radical innovations in representation, ushering in new spatial paradigms far more long-reaching and impactful on the discipline of architecture than the actual resultant maps.

Noticeably absent from the parables are the instruments that would allow such advancements in surveying, cartography, and reality capture. Surveying tools from the most basic ropes of the Egyptian surveyors, the Harpedonaptae, to the most advanced contemporary methods of LiDAR (light detection and ranging) are all based on establishing straight lines of measurement. This has been accomplished primarily through three fundamental methods: gravity, rays of light (sun or laser), and polar coordinates —all projective vectors. In contrast, the linear vector-based measurement devices dedicated to simulacra through history include a range: primary rope surveying tools from the first Egyptian settlers of the Nile, A-frame levels, merkhets, sundials, hodometers, dioptras, chorobates, gromas, astrolabes, compasses and rulers, camera obscuras, theodolites, and the contemporary laser scanner.

The strive toward mapping perfection of 1:1 has been aided by successive empirical methods of measurement and verification. More important to the development of the discipline of architecture are the divergent trajectories of abstracted spatial ontologies that have evolved as the unintentional byproduct. The following are four key instances that have generated major innovations in architectural representation at the purple threshold between reality and simulacra.

One: Invention of Linear Perspective. The desire to validate through measurement was a common trait of the Renaissance. The humanist spirit was characterized by a reinvestment in classical Greek and Roman thought, which in turn motivated a search for truth through a mathematical approach in all endeavors. During this time, translations of *Perpsectiva* and Ptolemy's *Geographia*, which described optical techniques of projection for cartography, were circulating among Florentine intellectuals and artists. Determined to apply their newly found measurement skills, Filippo Brunelleschi (1377–1446) and his friend Donatello (1386–1466) were some of the first artists to use surveying techniques to examine Roman ruins. Although Brunelleschi is credited as the inventor of perspective, circa 1425, it is not quite clear how he constructed it. According to biographer Antonio Manetti, the first perspective image was Brunelleschi's painting of the Baptistery in Florence, which was intended to be seen as a reflection in a mirror held by the viewer.[6] The mirror demonstrated Brunelleschi's mathematical approach through the use of Euclidian optics or *perspectiva naturalis*. It is speculated that he combined knowledge of optics with projective surveying techniques to construct the first linear perspective.[7]

5 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

6 Antonio di Tuccio Manetti, *The Life of Brunelleschi,* trans. Catherine Enggass (University Park, PA: The Pennsylvania State University Press, 1970), 52–54.

7 Samuel Y. Edgerton, *The Mirror, the Window, and the Telescope: How Renaissance Linear Perspective*

Two: Invention of the Section**.** Once architects gained agility operating within the new three-dimensional spatial domain that linear perspective ushered in, questions arose regarding the "proper" representational method for the rendering of the interior. A growing debate ensued over two possible techniques, the section perspective or the section with orthogonal projection. Again, the problem of representation comes back to surveying. At the height of this representational debate, in 1515, Raphael was appointed chief architect in charge of St. Peter's Basilica and gained authority over all antiquities unearthed within Rome. Concerned with the preservation of Roman antiquities, Raphael wrote a letter to Pope Leo X with specific instructions on surveying and representation of the ruins. In his letter Raphael emphasized the orthogonal projection for elevation and, most importantly, section drawings as explicitly architectural forms, dismissing perspective as imprecise and painterly.[8] Raphael's distinction has proven to be a highly consequential one. First, it established a standardization for both the surveying and documentation of architecture that still exists today. Second, it positioned architectural representation within the measured, mathematical space of projection—divorced from the illusion of drawn three-dimensional space—the conventions of which are often legible only to architects.

Three: Invention of the Space of Figure Ground. *Nuova Pianta di Roma* (1748) by Giovanni Battista Nolli is celebrated as the first scientific rendering of Rome. Advances in methods of triangulation coupled with the rotatable plane table, known as *tavoletta pretoriana*, enabled Nolli to survey the city with an unprecedented degree of accuracy and efficiency.[9] On the map, open public spaces like streets, piazzas, churches, and courtyards are left white while private spaces like palazzi and convents are hatched. The gray hatch renders the urban fabric as a uniform ground from which the figures of public space emerge as molded volumes. Figure ground representation of the Nolli map makes the hidden interior chambers of ecclesiastic space visible. This novel representation made clear that interior space becomes equally responsible for shaping the public life of the city as the outdoor public squares and piazzas.

Four: Invention of the Worm's-Eye Axonometric Cut-Away. Engineer and historian Auguste Choisy was the first to systematically use axonometric drawing to represent architecture. His first book and Roman survey, *L'art de bâtir chez les Romains*,[10] demonstrates a command of the axonometric, and specifically of the bottom-up view, erasing the ground plane and emphasizing interior space highlighting the ceiling vault. Spatial representation of interior space takes priority over perspectival and exterior representation of buildings. By the time of his later publication *Histoire de l'Architecture*,[11] Choisy illustrated the entire history of architecture with over 1,400 axonometric drawings. His preference for the axonometric enabled swift reconstruction, direct measurement, and scientific objectivity, and it tolerated no ambiguity.[12] Although Choisy's immediate concern was to express the transfer of gravitational force from vaulted ceilings to pillars to ground—hence the view from below—he inadvertently revealed the history of architecture as the development of the spatial interior.

Changed our Vision of the Universe. (Ithaca, NY: Cornell University Press, 2009), 64.

8 Carlo Pedretti, *A Chronology of Leonardo Da Vinci's Architectural Studies After 1500*. (Genève, Switzerland: Librairie E. Droz, 1962), 168–9.

9 Jessica Maier, Rome Measured and Imagined: Early Modern Maps of the Eternal City. (Chicago: The University of Chicago Press, 2015), 211–17.

10 Auguste Choisy, *L'art de bâtir chez les Romains* (Paris: Ducher, 1873).

11 Auguste Choisy, *Histoire de l'Architecture* (Paris, 1899).

12 Mario Carpo and Frédérique Lemerle, eds., Perspective, Projections and Design: Technologies of Architectural Representation (New York: Routledge, 2008).

Baroque Topologies

Recent development and accessibility of LiDAR technology allows unprecedented empirical verification of Baroque architecture that typically eluded total representation and accurate measurement of as-built conditions. Less explored, but even more important for architectural discourse, are the new opportunities embedded in the technology for advances in architectural representation.

Below are four novel forms of architectural representation that have emerged from *Baroque Topologies* as the first extensive LiDAR survey of canonical Roman and Piedmont Baroque churches. The survey presents new circumstances to re-represent the most iconic Baroque churches, in completely novel and unfamiliar ways. Rather than re-create the experience of visiting these works (nothing can replace this), *Baroque Topologies* provides privileged, nonsubjective glimpses behind the curtain, reassessing how the works operate as deeply theatric wholes and simultaneously reassessing the role of LiDAR technology for designers and new forms of architectural representation(see Figures 1–4).

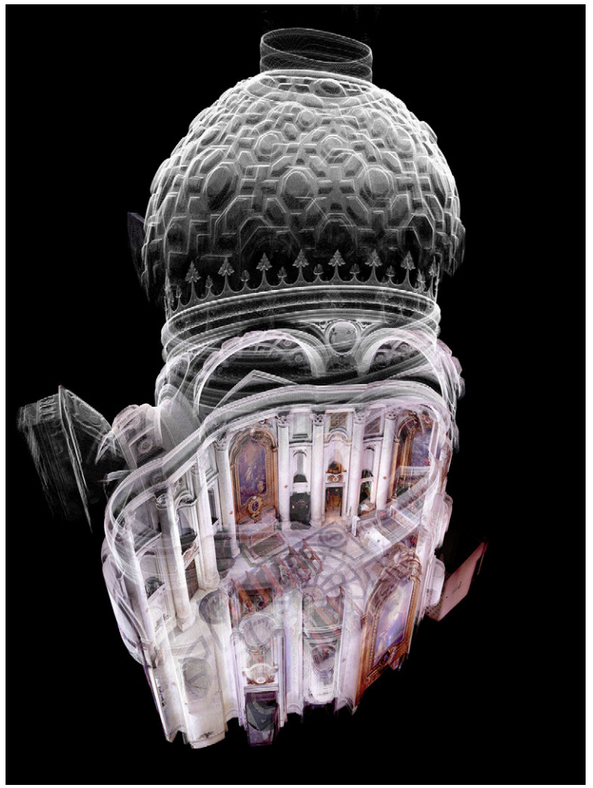

Figure 1. Andrew Saunders, *Baroque Topologies,* Point Cloud Series. Francesco Borromini, San Carlo alle Quattro Fontane 1634–1682, Rome. (2018).

One. *Diaphanous Bodies*. LiDAR point cloud models produce a novel effect of transparency due to the spacing of the points. *Diaphanous Bodies* enables a unique topological vantage point. The spatial envelope of the interior is viewed from the "outside" as well as from the "inside" simultaneously.

Two. *Spheroidal Cosmologies*. Much of the theatricality of Baroque churches occurs overhead in previously inaccessible, unmeasurable realms. *Spheroidal Cosmologies* reveals the project of the baroque cupola as one of both engineering daring as well as metaphoric orchestration of religious and cosmological space.

Three. *Kaleidoscopic Obliques*. Much of the effects of baroque space are subjective (opposed to objective) in the sense that their illusions are oriented to human perception, perspective view, and experience. *Kaleidoscopic Obliques* simultaneously lays out a multiplicity of orthographic projections of a single baroque interior, allowing an objective assessment of the theatrical machines.

Four. *Polychromatic Linings*. Baroque interiors are defined through discrete transitions of intense articulation and figuration. *Polychromatic Linings*

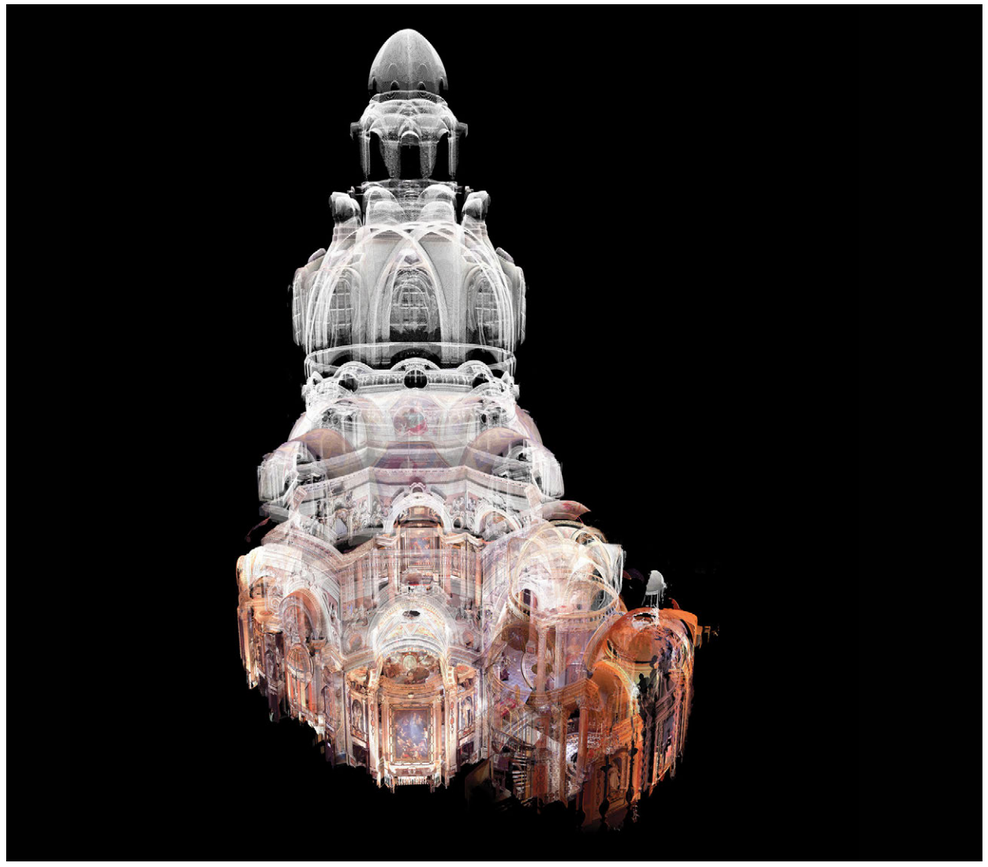

Figure 2. Andrew Saunders, *Baroque Topologies,* Point Cloud Series. Guarino Guarini, Church of San Lorenzo 1668–1687, Torino (2018).

detects this gradient formation through an unfolded color mapping the interior linings of baroque interiors based on curvature analysis.

Surveying is the origin of architectural representation and existed much before the invention of perspective, one of many breakthroughs where many accounts of architectural representation begin. This is true for surveying as a measuring act as well as surveying as an investigation of large collections. Often using measuring and investigation in combination, the survey leads to radical acts within the discipline that transcend the intentions of the initial pursuit or full fulfillment of an elusive, true 1:1 representation. The act requires an investment in current technological advancements often developed outside the field. Architects must pair these external inventions with their potential for close reading of the interiority of the discipline to reassess history by making the familiar unfamiliar again. In this vein, *Baroque Topologies* assesses the capacity for new instruments of measurement to contribute in unexpected ways to the larger contemporary cultural endeavor of the discipline of architecture.

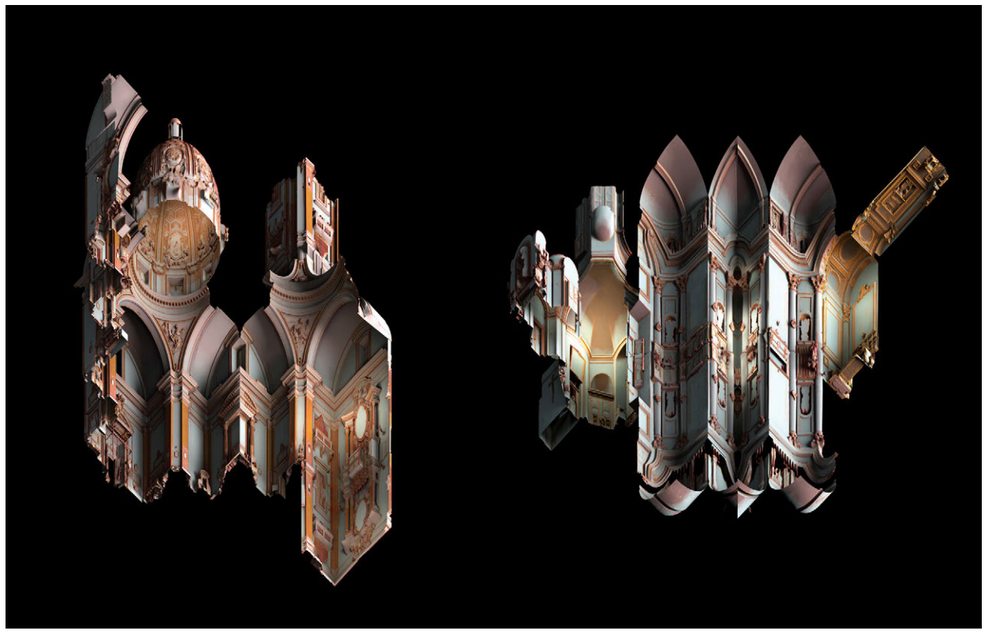

Figure 3. Andrew Saunders, *Baroque Topologies* Seminar at UPenn, Polychromatic Linings. Gian Lorenzo Bernini, Collegiata di Santa Tommaso da Villanova, Castel Gandolfo, 1661. Drawing by Bashayer Bamohsen & Francesco Borromini, Santa Maria dei Sette Dolori 1643–1655, Rome. Drawing by Nicholas Houser (2022).

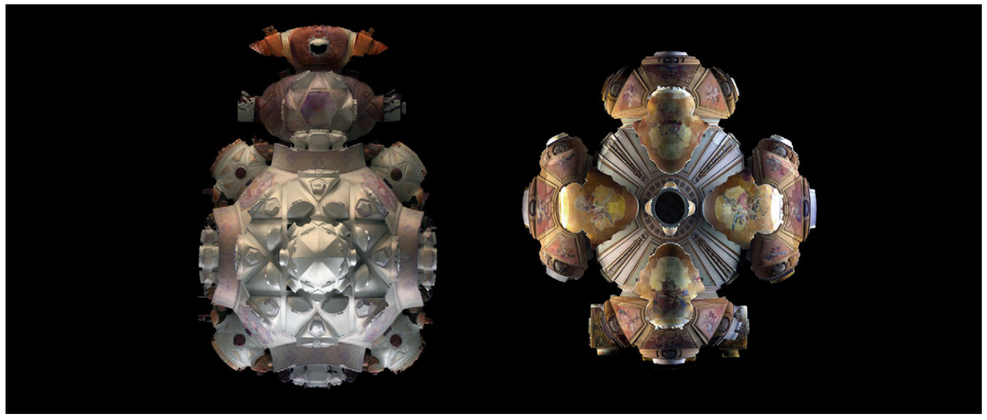

Figure 4. Andrew Saunders, *Baroque Topologies,* Spheroidal Cosmologies. Guarino Guarini, Church of San Lorenzo 1668–1687, Torino & Bernardo Antonio Vittone, Santa Chiara at Bra 1741–1742, Bra (2018).

Bibliography

Borges, Jorge Luis. *Collected Fictions*. Translated by Andrew Hurley. New York: Viking, 1998.
Carpo, Mario, and Frédérique Lemerle, eds. Perspective, Projections and Design: Technologies of Architectural Representation. New York: Routledge, 2008.
Carroll, Lewis, and Harry Furniss. *Sylvie and Bruno Concluded*. New York: Macmillan, 1894.
Choisy, Auguste. *L'art de bâtir chez les Romains*. Paris: Ducher, 1873.
Choisy, Auguste. *Histoire de l'Architecture*. Paris, 1899.
Eco, Umberto. *How to Travel with a Salmon & Other Essays*. Translated by William Weaver. San Diego, CA: Harvest Books, 1995.
Edgerton, Samuel Y. *The Mirror, the Window, and the Telescope: How Renaissance Linear Perspective Changed our Vision of the Universe*. Ithaca, NY: Cornell University Press, 2009.
Maier, Jessica. *Rome Measured and Imagined: Early Modern Maps of the Eternal City*. Chicago: The University of Chicago Press, 2015.
Manetti, Antonio di Tuccio. *The Life of Brunelleschi*. Translated by Catherine Enggass. University Park, PA: The Pennsylvania State University Press, 1970.
Pedretti, Carlo. *A Chronology of Leonardo Da Vinci's Architectural Studies After 1500*. Genève, Switzerland: Librairie E. Droz, 1962.
Wachowski, Lana, and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.

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If you are reading the ***Post-Screen*** book, please go to page **178**

If you are reading the ***Existential Scenarios*** book, please go to page **66**

A Purple Architecture

Design in the Age of the Physical-Virtual Continuum

Jason Vigneri-Beane

A Project

Showing up in

[redacted]

Spatio-Visual Regimes
Immersive

Post-Screen Cyborgs

Existential Scenarios
Human-Nature

Cephalon C_X.AR

Notes on a Cyborg Ecology Scenario

Designed by Studio EP
using MidJourney, and Runway

October 1st, 2023,
06:32 pm

Employing the keywords:
[staged], [set design], [symmetry], [plants], cyborg, architecture, ecology, technology, media, systems, intelligence, ontology, [on white background]

Has been discussed in essays by

Stephen Caffey
Mariana Ibañez & Simon Kim
Martin Summers

Cephalon C_X.AR

Notes on a Cyborg Ecology Scenario

Jason VIGNERI-BEANE

Cephalons, Scenarios, and Speculative Fabulation

> Cyborg unities are monstrous and illegitimate; in our present political circumstance, we could hardly hope for more potent myths for resistance and recoupling.[1]
> –Donna Haraway, *A Cyborg Manifesto*

Cyborgs are purple entities par excellence. They live in two realities at once. They are not only hybrids of organic and inorganic material realities, but they are also hybrids of physical and virtual beings. Cyborgs are physical beings of synthetic flesh, kinematic structures, and electronic systems. They are also virtual beings that exist as digital agents, artificial intelligence systems, and bodies of information. They are simultaneously embodied entities and data models. These two states of being are so totally intermeshed with each other that there can be no cyborg without them. Yet the cyborg may also be expanded here, in more than anthropocentric ways, into a distributed spatial collective of diverse entities. By expanding the unified hybrid being of the cyborg, populations of living and nonliving entities (and the machinic relationships among them) form cyborg ecologies (see Figure 1). As collective hybrids, cyborg ecologies are mixed-realities. They are materially embodied and virtually modeled across space and outside of normative categories of being such as natural/artificial, organic/inorganic, or physical/virtual. Cyborg ecologies are necessarily speculative as the mutually reinforcing feedback loops among their material bodies and computational programs are constantly modeling and enacting their possible futures.

According to Jennifer Gabrys, the mutually reinforcing relationships among embodied spaces and data models can form "new configurations or 'techno-geographies' that concretize across technologies, people, practices, and nonhuman entities." Gabrys suggests that the earth is becoming programmable and speaks of the "becoming environmental of computation."[2] Sensors, for example, do not simply harvest physical phenomena and transform them into documentary data but, rather, they trigger the making of new worlds. New electronic worlds multiply and coexist as data models along with the physical worlds from which they are sensed. Yet these electronic worlds are more complicated than that when environmental data-harvesting technologies feed back into the physical world. Sensors feed data to softwares that, in turn, feed back into the hardwares that alter the embodied physical world of flora, fauna, and atmosphere. For example, experimental forest ecologies such as Free Air CO_2 Enrichment (FACE) programs, sensor systems, and software do not merely read and document environments. Rather, they become physical-virtual agents to program those environments. Target levels for the environmental features of a FACE, such as moisture, temperature, and CO_2 levels, can

Figure 1. *Cephalon C_X.AR*: Mixed-Realities and Collective Hybrids. Jason Vigneri-Beane (2022).

be programmed. Sensors read the environment for its differences with the targets. In turn, software triggers hardware infrastructures in the FACE to adjust environmental levels until the targets are met, thus triggering changes in an ecosystem's biotic and atmospheric entities. Changes in ecological makeup alter the values of that which is sensed which, once more, prompts hardware infrastructures to tune the ecosystem again in a continuous feedback loop. In a FACE, ethereal/virtual and corporeal/physical worlds couple to form what one might imagine as a composite being that exists simultaneously in virtual and physical categories of being. The physical-virtual hybridity and the purpleness of the cyborg has now been extended to a scale of a cyborg ecology.

Cephalon C_X.AR is one such cyborg ecology (see Figure 2). It aspires to be an act of what Donna Haraway has called Speculative Fabulation[3] or Science-Art Worlding: the act of near-future worldbuilding using science and art in diverse and speculative ways in relation to socio-ecological scenarios. For Haraway, tentacular thinking is critical to Speculative Fabulation as it indicates plural and more-than-human ways of exploring the possibilities of a future scenario. *Cephalon C_X.AR* is a speculative architectural and ecological scenario in which a population of technological, ecological, and virtual entities are continuously modeling, making, and manipulating a synthetic site. The Cephalon is a multi-active architectural organ that harvests, processes, fuels, distributes, and organizes eco-technical entities. It is both cephalic (head-like and brain-like) and tentacular (extensive and exploratory).

1 Donna Haraway, "A Cyborg Manifesto," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), 154.

2 Jennifer Gabrys, *Program Earth: The Making of A Computational Planet* (Minneapolis: University of Minnesota Press, 2016), 4.

3 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, NC: Duke University Press, 2016), 10–13.

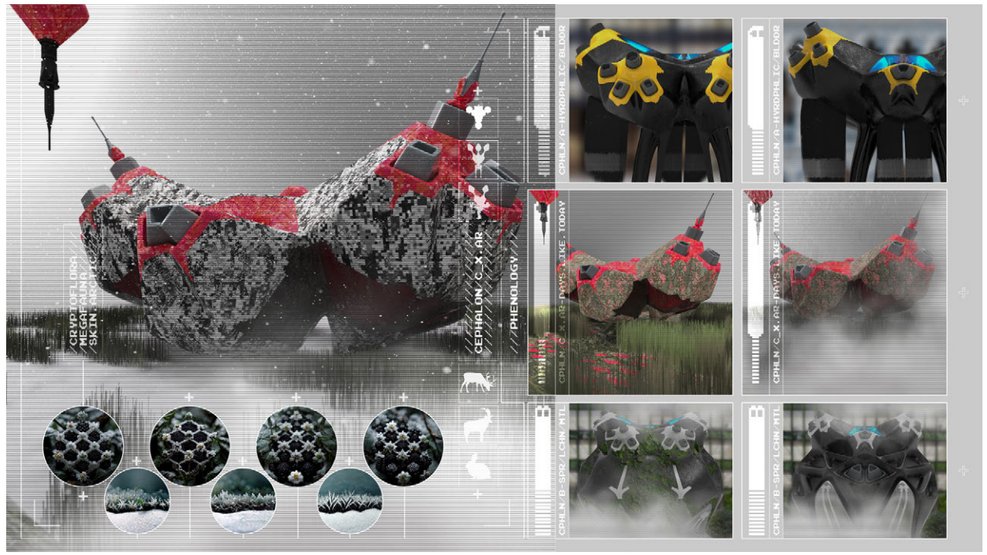

Figure 2. *Cephalon C_X.AR*: Phenotypical Variations + A.I. Cryptoflora. Jason Vigneri-Beane (2022).

The entities in, of, and around Cephalons, portents of a cyborg ecology, are listed: air, algae, bacteria, biopolymers, carbon, chlorophyll, DNA, dust, earth, electricity, fauna, flora, fruit, gels, ice, metals, minerals, phloem and xylem, pigments, pixels, salt, signals, silica, sunlight, tissues, vapor, and water. There are aerosols, antennae, augmented reality triggers, atmospheres, bladders, bots, cameras, cannisters, chips, cloud seeders, couplings, decals, drones, filters, heatsinks, hydraulic shocks, hydrophilic and hydrophobic skins, implants, LED lights, lenses, optical calibration targets, plungers, processors, receiver Radio Frequency Identification (RFID) tags, scanners, screens, seeds, sensors, servers, sockets, sod, syringes, vacuums, and vents.

According to the philosopher Ian Bogost, "Lists remind us that, no matter how fluidly a system may operate, its members remain utterly isolated, mutual aliens."[4] The diverse and unlikely inventory of objects above is the physical counterpart to the virtual and speculative modeling systems that generate and maintain a cyborg ecology. The *Cephalon C_X.AR* models algorithmic ecotones, constructed wetlands, fabricated fogs, machined substrates, mediated meadows, procedural landscapes, seed beds, spongy soils, synthetic skins, and terraformed crusts. Whether they are engaged through satellite feeds, machine vision macro-lenses, or the disembodied techno-organs of sensory networks, they are in constant states of physical-virtual feedback.

Cephalon scenarios are home to ontologically messy bestiaries of artificial intelligence (A.I.) cryptoflora, infrastructural organs, grafted grounds, mechanical creatures, and diverse fauna that physically manifest the virtual operations of sensor system software and A.I. modeling of possible worlds in a cyborg ecology (see Figure 3). Indeed, cyborg ecologies form what John Holland might call Complex Adaptive Systems (CAS).[5] In a CAS, multiple heterogeneous entities, called agents, interact with each other in nonlinear and nonhierarchical ways. Their intelligent peer-to-peer interactions create dynamic yet stable systems such as rainforests, economies, cities, and immune systems that adapt and evolve over time and scale. Agents interact with other agents to form meta-agents. In turn, meta-agents and meta-agents form meta-meta-agents. These systems are organizationally complex and are maintained by composite behaviors and relationships. They are neither hierarchies nor heterarchies. Rather, they are holarchies made of holons,[6] which are simultaneously parts and wholes: wholes at one scale are parts of other wholes at other scales. While holarchies thrive on peer-to-peer relationships as in a heterarchy, they also evolve (or devolve) via couplings or, perhaps as Haraway suggests above, radical "recouplings." Inter- and intra-active coupling operations among entities is critical to the hybridity of a cyborg ecology, even across physical-virtual boundaries.

Figure 3. *Cephalon C_X.AR*: Drones, Bots, A.I. Terraforming Models. Jason Vigneri-Beane (2022).

Cyborg ecologies receive Haraway's signals with regard to three breached, leaky, or broken ontological boundaries: human and animal, animal-human (organism) and machine, and the physical and

4 Ian Bogost, *Alien Phenomenology, or What It's Like to Be a Thing* (Minneapolis: University of Minnesota Press, 2012), 38–40.

5 John Holland, *Hidden Order: How Adaptation Builds Complexity* (New York: Basic Books, 1996), 1–40.

6 Lynn Margulis and Dorion Sagan, *What is Life?* (Oakland: University of California Press, 2000), 259.

nonphysical (or virtual).[7] As holarchies that are maintained by coupling, being trans-, and interactive agency, cyborg ecologies are havens for holoents. Haraway's term for whole entities, holoents are particular kinds of entities that get their wholeness from their hybridity, such as a cyborg. This hybridity is multi-ontological as it mixes historically separate categories of being, such as biology and technology or physicality and virtuality. In a cyborg ecology there are not only hybrids among the living but also hybrids among the organic and inorganic. What is more, there are multimodal and multi-ontological hybrids among corporeal and ethereal entities, such as physical beings and information technologies. A cyborg ecology is one thing that is many things and, in turn, a whole thing that is diverse things (see Figure 4).

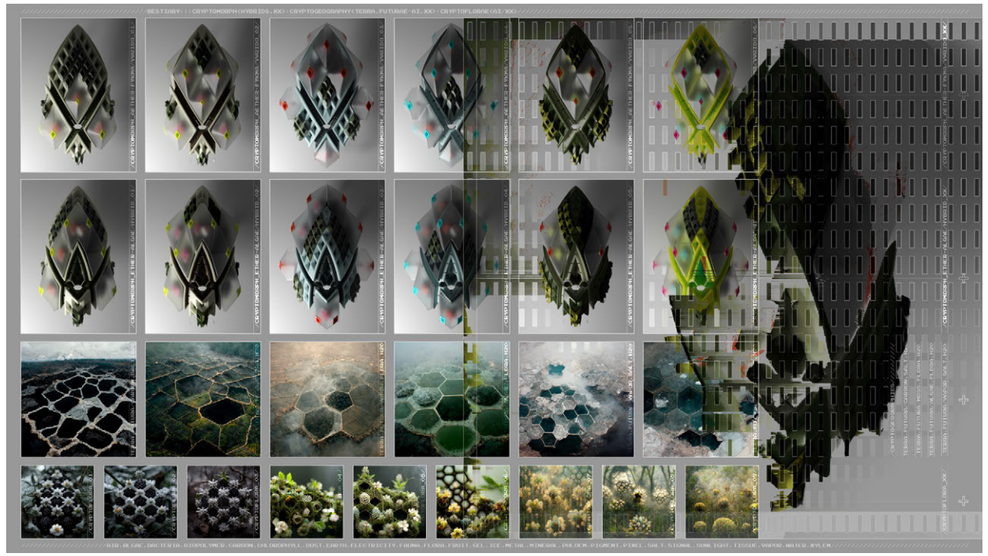

Figure 4. *Cephalon C_X.AR Bestiary*: Hybrid Cryptomorphs, A.I. Cryptoscapes, A.I. Cryptoflora. Jason Vigneri-Beane (2022).

Toward a Cyborg Ecology

Spurred by Haraway's *A Cyborg Manifesto*, Cephalon cyborg ecologies are not "the final imposition of a grid of control on the planet." Rather, they operate on Haraway's assertion that, "from another perspective, a cyborg world might be about lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints."[8] From this notion, we can attempt to project preliminary notes toward a Cyborg Ecology.

7 Donna Haraway, "A Cyborg Manifesto," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), 151–53.

8 Ibid., 154.

Cyborg ecologies emerge at the intersection of ecology, technology, and media. They are both embodied and encoded. Their physicality and virtuality are enmeshed within each other to the extent that they become both programmable ecologies and ecologies of programs. Biological programs grow and adapt. Machinic programs implant and extract. Sensory programs harvest and respond. Computational programs model and speculate. Visualization programs augment and enact. Biological and technical organs abound as holons and operate via processes of mutually reinforcing synthetic evolution that make them intensely artificial.

Cyborg ecologies involve spatio-material registers of ground, water, and air while interacting with flora, fauna, minerals, and media. They traverse these registers but they also ingest them, sense them, and configure them. They spread by terraforming yet they inhabit the air in order to tune atmospheres in feedback relationships with sensor networks and environmentally altering micro-infrastructures. They are explicitly material worlds of earth, fluids, and flesh, as well as virtual worlds of models, servers, and signals. They emerge out of the enmeshed logistics of organic and inorganic biotechnologies with analog and digital information technologies. They consist of constructed relationships between organic, machinic, and informational systems and operate as mixed-realities for mixed-ontologies.

Cyborg ecologies embrace artificiality to instantiate worlds by simultaneously building physical environments and virtual models. They iterate a physical world by evolving multiple virtual worlds in feedback relationships with each other. Paradoxically, they are both locally and remotely sensed and operated. They proliferate categories of objects, create niches for diverse beings, and offer habitats for creatures and machines (see Figure 5). They have parallel lives in interfaces and produce strange physical bi-products from the virtual processes that run in parallel to them. As multiscalar meshworks, they are open systems that thrive on inclusiveness and diversity and reject autonomy and homogeneity. Ultimately, cyborg ecologies are portents that pressure design in the age of environmental change into diverse purple collectives of agents, hybrids, and holoents.

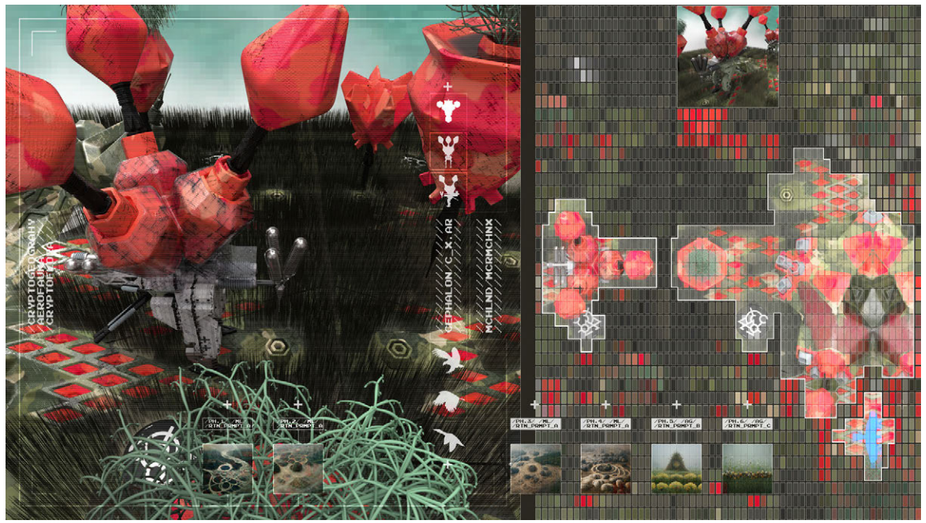

Figure 5. *Cephalon C_X.AR*: Habitat for Machines, Media + Creatures. Jason Vigneri-Beane (2022).

Bibliography

Alaimo, Stacy. *Bodily Natures: Science, Environment and the Material Self*. Bloomington: Indiana University Press, 2010.

Bogost, Ian. *Alien Phenomenology, or What It's Like to Be a Thing*. Minneapolis: University of Minnesota Press, 2012.

Bratton, Benjamin. *The Terraforming*. Moscow: Strelka Press, 2019.

Bryant, Levi. *Onto-Cartography: An Ontology of Machines and Media*. Edinburgh: Edinburgh University Press, 2014.

Gabrys, Jennifer. *Program Earth: The Making of A Computational Planet*. Minneapolis: University of Minnesota Press, 2016.

Haraway, Donna J. *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge, 1991.

Haraway, Donna J. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham, NC: Duke University Press, 2016.

Holland, John. *Hidden Order: How Adaptation Builds Complexity*. New York: Basic Books, 1996.

Margulis, Lynn, and Dorion Sagan. *What is Life?* Oakland: University of California Press, 2000.

Morton, Timothy. *Hyperobjects: Philosophy and Ecology after the End of the World*. Minneapolis: University of Minnesota Press, 2013.

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Design in the Age of the Physical-Virtual Continuum

A Purple Architectura

Please scan the QR code for the augmented reality (AR) experience.
Feel free to point at the typography page t
o anchor the AR content.

A Series of Purple Essays.

Marta Nowak

An Essay

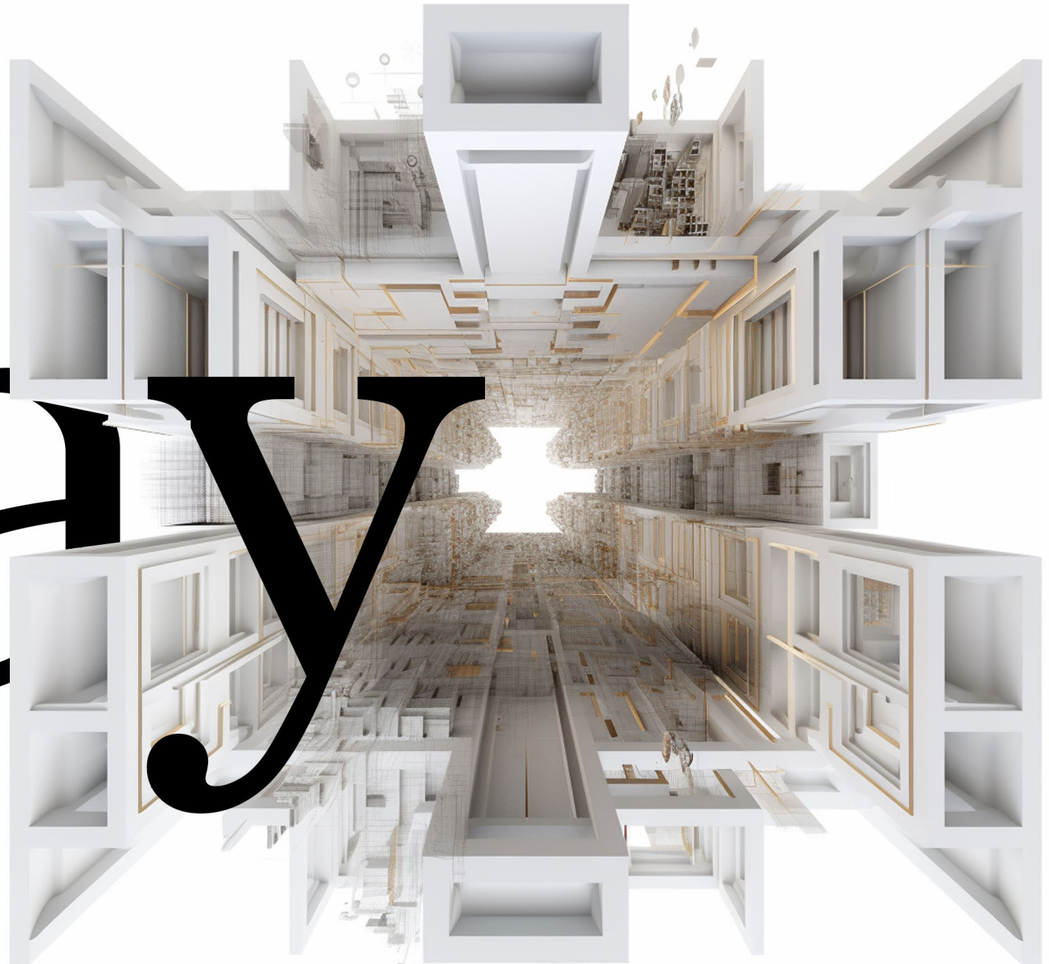
Spatio-Visual Regimes Pictorial

Quantum Architecture

The Escape from the Finite Universe of Design

Discussing projects by

Andrew Kovacs
Beom Jun Kim
Perry Kulper
Rachael McCall
James Billingsley & Patrick Danahy



Designed by Studio EP
using MidJourney

June 6th, 2023, 10:44 pm

Employing the keywords: quantum architecture, superpositions, simulation, hyperreality, escape from the universe, [on white background]

Quantum Architecture

The Escape from the Finite Universe of Design

Marta NOWAK

Quantum Architecture

Infinity (∞). The infinity symbol was first put on paper by English mathematician John Wallis in his 1655 book, *De Sectionibus Conicis*.[1] Explored as early as the first century BC by Greek philosophers like Anaximander (c. 610-c. 546 BC), who used the word *apeiron*, meaning "unbounded" or "indefinite," and Aristotle (350 BC), who theorized on potential infinity versus actual infinity, the concept of infinity as a scientific phenomenon did not enter the domain of Western culture until the development of infinitesimal calculus in the seventeenth century.[2] In the East, on the other hand, the idea was in the works for centuries. As early as the third and fourth centuries BC, *Jain,* the ancient Indian text on mathematics, already classified all numbers into three categories: enumerable, innumerable, and infinite (nearly infinite, truly infinite, and infinitely infinite). For much of its history, Western culture took comfort in the idea of a finite, bounded world, a singular universe, with fixed entities and boundaries—even Newton believed in the fixed stars system within the universe.[3] It wasn not until the early twentieth century that the Hooker telescope at the Mount Wilson Observatory revealed new images of the world and enabled two major discoveries: first, there are countless galaxies (1924), and second, the universe, propelled by dark matter, is infinitely expanding (1927). These discoveries allowed Belgian cosmologist Georges Lemaître to develop the Big Bang Theory in 1931, fundamentally transforming our understanding of the world and positing the universe not as finite and fixed but infinite and expanding.

These discoveries coincided with the development of kinetic theory and quantum mechanics that had begun at the turn of the twentieth century. Albert Einstein's 1905 paper, *On a Heuristic Viewpoint Concerning the Emission and Transformation of Light,* challenged the electromagnetic theory of light, the crowning achievement of nineteenth-century theoretical physics, and eventually gave birth to the field of quantum physics in 1930.[4] Through these scientific breakthroughs in the first decades of the twentieth century, two theories operating on the most extreme scales—the theory of probabilistic behavior of energy quanta at molecular (microscopic) scale, and the theory of the expansion of the universe at macrocosmic scale—challenged the concept of time and space as finite and fixed constructs. From then on, space and time could be understood as infinite number of spaces × infinite number of times, happening all at once.

It took us close to a century more to develop theories around quantum physics and how it would transform gravity in relation to space and time, and to begin comprehending the enormous impact of these discoveries on our understanding of the world. Philosophical works, such as Jean Baudrillard's *Simulacra and Simulation,*[5] introduced concepts of different realities and parallel universes, in turn inspiring works in popular culture and cinema that allow us to grasp and imagine those new realities. While movies like *The Matrix* (1999),[6] *Memento* (2000),[7] *The Butterfly Effect* (2004),[8] and *Coherence* (2013)[9] begin to explore the implication of those concepts, it is really *Interstellar* (2014)[10] and finally *Everything, Everywhere, All at Once* (2022)[11] that for the first time visualize and explain quantum physics.

Despite the fascination of pop culture and cinema with quantum science, architecture has often taken a cold stand. With the exception of a handful of texts—most notably John Bell's *Quantum Theoretical Issues in Architecture: It's A Lot Stranger than We Think*[12]—there is not much one can find on architecture and quantum theory. There are, however, in my view, visible traces of quantum theory in the works of contemporary architects and designers that differentiate themselves from those of an earlier generation. Looking at the work of Andrew Kovacs, James Billingsley and Patrick Danahy, Rachael McCall, Perry Kulper, and Beom Jun Kim, I will be examining a few of those instances by referencing Daniel Kwan and Daniel Scheinert's recent film, *Everything, Everywhere, All at Once*. Through this analysis, I define *quantum architecture* from four key perspectives that allow for drawing parallels between architecture and the multiverse of quantum physics: matter, time, space, and choice.

Matter

If you have not yet seen *Everything, Everywhere, All at Once*, I think you are missing out on what I would call a quintessentially 2022 movie: confusing amalgam of overwhelmed characters and a nonlinear storyline that touches on everything from contemporary family and socioeconomic dynamics to issues of race, culture, and politics—a film that fits into drama, comedy, science fiction, fantasy, and animation genres all at once. The movie is a story of Evelyn Wang (Michelle Yeoh), a middle-aged Chinese American woman who runs a floundering laundromat under an IRS audit. Aside from her business, Evelyn has a range of personal issues and people to care for, from accepting her bisexual daughter for

1 John Wallis, *De Sectionibus Conicis* (Oxford, 1655).

2 Aristotle, *Physics: Books III and IV*, trans. Edward Hussey (Oxford: Clarendon Press, 1983).

3 John Lobell, "Quantum Theoretical Issues in Architecture," *Tarp* 2 (Spring 2004): 20.

4 In that paper, Einstein wrote, "In accordance with the assumption to be considered here, the energy of a light ray spreading out from a point source is not continuously distributed over an increasing space but consist of a finite number of energy quanta which are localized at points in space, which move without dividing, and which can only be produced and absorbed as complete units." This statement, it has been argued, is considered "the most 'revolutionary' sentence written by a physicist of the 20th century" and the reason is that Einstein's audacious claim contradicted a century of "compelling empirical evidence, and it challenged the crowning achievement of 19th-century theoretical physics: the electromagnetic theory of light." See: Albert Einstein, "Concerning a Heuristic Point of View Toward the Emission and Transformation of Light," *American Journal of Physics* 33, no. 5, (May 1965): 2. For more on the impact of Einstein's theory, see Richard Harris, "Albert Einstein's Year of Miracles: Light Theory," March 17, 2005, National Public Radio, transcript and mp3 audio, 6:11, https://www.npr.org/2005/03/17/4538324/albert-einsteins-year-of-miracles-light-theory; See also John S. Rigden, "Einstein's Revolutionary Paper," *Physics World*, last modified April 01, 2005, https://physicsworld.com/a/einsteins-revolutionary-paper/.

5 Jean Baudrillard, *Simulacra and Simulation*, ed. Sheila Glaser (Ann Arbor, MI: University of Michigan Press, 1994).

6 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

7 *Memento*, directed by Christopher Nolan (Beverly Hills, CA: New Market Films, 2000).

8 *The Butterfly Effect*, directed by Eric Bress and J. Mackye Gruber (Burbank, CA: New Line Cinema, 2004).

9 *Coherence*, directed by James Ward Byrkit (New York: Oscilloscope Laboratories, 2013).

10 *Interstellar*, directed by Christopher Nolan (Hollywood, CA: Paramount Pictures, 2014).

11 *Everything Everywhere All at Once*, directed by Daniel Kwan and Daniel Scheinert (Los Angeles, CA: Ley Line Productions, 2022).

12 John Lobell, "Quantum Theoretical Issues in Architecture," *Tarp* 2 (Spring 2004): 20.

who she is and dealing with an ongoing divorce with her husband to taking care of and managing her old, conservative Chinese father. And with all that dull setup, what follows is a series of unexpected and ridiculous twists and turns of a multiverse struggle to find meaning in her unbearable life. The movie plot begins to seemingly fall somewhere within the genre of a tragic drama, but then quickly turns into a savvy fast-paced martial arts action adventure, just to assure the audience that it is indeed a multiverse sci-fi weaved together with large bits of dark comedy.

Everything, Everywhere, All at Once is a movie jammed with a ridiculous number of ideas, miraculously holding onto a thin strand of a storyline, without becoming an absurd mess—and at the same time becoming just that. Watching *Everything* is like being bombarded with visual stimuli thrown at your eyes at a high rate, while twisting your brain and tearing your emotions at every scene. If you can imagine that, multiply it times three. The movie is unstoppable, taking you through different universes, jumping back and forth like a flickering moth, and no idea is too wild to be exercised: from hot dog fingers, talking rocks, and pinky Kung Fu to "raccacoonie," as opposed to *Ratatouille* (2007),[13] and a black hole called "Everything Bagel." The absurdity and the kitsch pour in between tragic nihilistic suffering and depression of the characters. As you watch the movie, somewhere between moments of spiritual suffocation and short-lived relief, when your body is motionlessly glued to the seat, you get to understand the meaning of meaninglessness in that vast, infinitely oscillating multiverse.

Just like *Everything*, Kovacs' *The Chicago Model* is full of absurdity. The colossal model consists of anything one can possibly imagine: a classical column, a white suburban yard fence, a pink glossy cupcake with a cherry, an overscale teapot from *Alice in the Wonderland*[14] sitting upright on its handle with the spout functioning as a seat, the U.S. Capitol with a sprayer head as the dome, or a drainpipe propping up a green arch that holds a walkie talkie on top. Somewhere there you can also find many leaning Towers of Pisa, a rubber toy elephant, a carrot, and a little Buddha statue. Many of the elements repeat themselves at different scales, colors, orientations, and locations. All that madness, just like in *Everything*, comes together surprisingly well in a unified whole, or perhaps many different wholes all at once. A suffocating and overbearing experience at times, *The Chicago Model* is an endless semiotic game that challenges the meaning and nature of familiar objects by removing and disassociating them from their context—an obsessive-compulsive organization that presents an order, in Kovacs' model, out of complete disorder. But its ultimate concern is the "matter" of architecture: What's the matter? Or more specifically, what is the "real" and what is not? It is an infinite dance around an ontological interrogation that never gets to be answered.

But it might be more important here to highlight *The Chicago Model*'s method of construction, which Kovacs calls "freestyle." He describes it as a hybrid method of combining traditional model-making techniques in architecture, like measuring, cutting, gluing, and assembling new objects, with the act of collecting, cataloging, and altering found ones (see page 168). As simple as it sounds, the model was built over the course of three months, and the freestyle method really involved an intense process of searching, scavenging, hunting, gathering, sorting, discussing, negotiating, designing, fragmenting, assembling, and reorganizing. The elements came together from 99 Cents Only and thrift stores, and the whole process of bringing the model to life was captured in a film by Phil Donohue. This hybridization of the model's techniques and methods of construction further exhibits the boundlessness of the model(s) and the narrative(s). The process suggests that it could, possibly, continue without an end, with the many repetitive parts and fragments of the model producing infinite variations.

13 *Ratatouille*, directed by Brad Bird (Buena Vista, CA: Pixar Animation Studios, 2007).

14 Lewis Carroll, *Alices Adventures in Wonderland* (New York, NY and London, UK: Bloomsbury, 2001).

Similarly, but at a different scale, Beom Jun Kim's *The Digital Mobius* uses the infinite flow of data as an augmentation embedded into a physical model of a nine-square grid pavilion. The walls, floors, and ceilings of the pavilion are transformed into a continuous loop of information that displays an ever-changing and infinite stream of social media posts, tweets, selfies, and search engine results, all mixed together while being sourced from the participants. The density and intensity at which all the junk is coming at you is juxtaposed by the stillness and quietness of the architecture. "Projects like *The Digital Mobius*," Kim rightly points out, "are attempts at reconciling the speed of information with the slowness of architecture in an age when culture becomes homogenized as information" (see page 142).

Whether "matter" is composed of physical objects or digital data, explored through methods and techniques, is constructed or assembled, or engaged via technologies that mediate our relations and experiences and provide an interface that allow us to navigate our physical or digital environments, one may question the overwhelming number of things, choices, and options we face. In the plethora of contemporary media, the infinite stream of images and information, singular messages or meanings are increasingly obscured and enveloped by noise, and objects are increasingly becoming things.[15] It seems as though infinity has finally caught up with architecture. And in those infinite, oscillating scenarios one may recognize the lack of inherent meaning only to then realize that all things—moments, matters, methods, and choices—are equally meaningful. And that beyond the object, the sign and its signifier, architecture is to be understood as a condition within the space-time continuum.

Space

Besides the plethora of stimuli, what stands out about *Everything* is its depiction of the multiverse. *Everything* builds upon what preceded the history of the exploration of parallel universes and the oscillation between reality-virtuality from movies like *The Matrix* (1999), *Run Lola Run* (1998),[16] *Memento* (2000), *The Butterfly Effect* (2004), and *Mr. Nobody* (2009).[17] But these movies are based on a simple premise in physics: space and time are each singular constructs. Spyridon Michalakis, a mathematical physicist at the California Institute of Technology and a frequent consultant to multiverse Hollywood movies, says it's "not like you have space and then time; it's space × time."[18] In philosophy, the concept of space × time would be replaced by the term "reality" and the question of what is real and what is not. The premise that reality may not necessarily be perceived and entirely explained by our senses reaches as far back as Plato's allegory of the cave[19]—the true essence of a physical object may be just the shadow in the cave, therefore a limited reflection or an illusion of the true object. Jean Baudrillard's theory in *Simulacra and Simulation* takes a different stand. Baudrillard claims that human experience is purely a simulation of reality, and that society has concealed all reality and meaning with symbols and signs.[20] In this simulation, reality has become inaccessible. Baudrillard calls this simulated reality, where the real and the illusion are merged into one, "hyperreal." The difference between the Platonic problem of illusion and the postmodern problem of simulation is that in the Platonic world the illusion and the

15 Bill Brown, "Thing Theory," *Critical Inquiry* 28, no. 1 (Autumn 2001): 3.

16 *Run Lola Run*, directed by Tom Tykwer (Berlin: X Filme Creative Pool, 1998).

17 *Mr. Nobody*, directed by Jaco Van Dormael (Paris: Pan-Européenne, 2009).

18 Alex Abad-Santos, "Everything Everywhere All at Once, Explained by a Quantum Physicist," *Vox*, April 15, 2022, https://www.vox.com/platform/amp/culture/23024945/everything-everywhere-all-at-once-multiverse-explained-quantum-physicist.

19 For more information on Plato's allegory of the cave, refer to passages from *The Republic*, circa 380 BCE.

20 Douglas Kellner, "Baudrillard, Semiurgy, and Death," *Theory, Culture & Society* 4, no.1 (1 February 1987): 126.

reality are two clearly different concepts, whereas in the postmodern problem of simulation reality and simulation are indistinguishable. As Baudrillard writes: "The impossibility of rediscovering an absolute level of the real is of the same order as the impossibility of staging illusion. Illusion is no longer possible, because the real is no longer possible."[21] Yet we continue to witness the shared human desire to pursue the truth, to escape from the cave, to disconnect from the Matrix by taking the red pill, or, in the case of Evelyn, to jump from one universe into another.

In a similar way, Perry Kulper's work attempts to ground itself in the space × time construct by developing a narrative around it, and then, in the final moment, escaping from it, twice. The carefully constructed images are not what one thinks they really are. *Aerial Diptych Follies*, in collaboration with Oliver Popadich, first appeared as two-dimensional collages that use many of the key surrealist methods of worldbuilding: symbolic imagery, dream-like scenes, unexpected absurd juxtaposition, and the bizarre assemblage of ordinary objects combined with often random biomorphic and architectural references. It gives us a glimpse of the mixing of different realms and utilizes the power of the unconscious and dreams (illusions) all in one image.

But when we investigate the space × time concept for a bit longer, we can notice what I would call the first escape from the universe. And that escape is not really in the matter of the project but hidden in the method of its making. As it turns out, the *Follies* are not flat images. They were constructed as three-dimensional (3D) scenes and were photographed perfectly perpendicular to the picture plane to give us an illusion of something completely flat. The 3D compositions include fully 3D objects, such as birds, a wooden cage, a fully built Capitol building, rockets, a globe, and floating planets, all suspended in space in front of a two-dimensional plane. The scenes were completely devoid of shadows when photographed, giving us the illusion of something they are not. And finally, when you think you comprehend the construction of the image, the second escape from the universe happens; that is the reveal of the photograph of the scene being photographed. The photograph includes the 3D composition of the *Follies*, where the entire composition is hanging from the rods on the ceiling, propped up on a modular podium, somewhere in the dark studio filled with foldable chairs and lit by the abandoned studio lights. There is no one in the studio but the project itself, sitting alone awaiting shooting. That is another reality of the project: the real setup, the true and the original piece, alone in the dark studio. It is the original Platonic figures that produce the representation on the cave wall.

Time

We cannot define space without time. Both concepts exist together. You do not have space and then time, but it is rather space × time. In quantum physics, space-time is called a superposition. A superposition is a singular event or a singular universe, often described or visualized as an interference of one out of an infinite number of universes. In quantum physics, it is not just one space time; a quantum superposition is one of an infinite number of space times, all happening at the same time. Michalakis explains that each of the superpositions has various things happening at some microscopic level: "When you zoom out from our microscopic human perspective, we get to see certain patterns like space and time and matter emerge, and particles that have some more definite positions, in both space and time."[22] This is how in *Everything*, Evelyn can first jump between two universes, and later she enables herself to access the other universes that she is part of all at the same time. There is an infinite number of possibilities based on all different numbers of choices and decisions she took in her life that ultimately led her to a completely different outcome. She can see herself in another universe as a successful performer, or a chef, as a woman marrying someone completely different, being rich, having a great relationship with her parents, or living in different parts of the world. Many scenarios take her out of her dull, miserable, stressful, and unbearable life. None of these worlds are simulated, none of them are an illusion, but they just are.

This is what is so striking about Rachael McCall's *Wildflowers* and her argument about the "flickering and flashing" nature of film. McCall considers film "unstable compared to other forms of representation in architecture," (see page 188) and she carries that instability into her own work. McCall purposefully chooses superfluous geometries and material textures that take a longer time to be rendered by the computer engine. She then renders the flowers at different resolutions, and therefore degrees of development, and then overlays the results. So, what you see is a single image of a flower that has at least four different render superpositions embedded within it, which include various material resolutions and qualities, and therefore durations and times, displayed all at once. The rendered pieces range from 0.4 seconds to 4 hours, resulting in a composition where each superposition has its own qualities—from raster, pixelated fragments to glossy and beautifully lit pebbles. McCall rightly sees the outcome as "a flicker and a flash in a longer sequence" (see page 188). However, the key here is not to see the outcome as a whole, but rather an overlay of the many different realities (space × times) coexisting on top of each other all at once.

In contrast to McCall, James Billingsley and Patrick Danahy generate superpositions by means of image subdivision through the use of OpenCV. Here the idea of infinity is explored not by multiplication and overlay but by subdivision. The authors were not fully satisfied with the formal and visual qualities of the outcome and quickly moved to another tool. In my view, however, the uniform and non-uniform tiling, with subdivision for image compression, edge dissolution, and style transfer of their initial work, begins to explore and touch on larger topics of space × time, infinite universes, and hyperrealities within representation in landscape architecture. The landscape superpositions have different qualities: some appear more pixelated and low-res, whereas others are more refined and high-res. And once the non-uniform tiling is introduced, the tiles can operate at different scales. This introduces a new level of hierarchy that prevents us from looking at, comparing, or overlaying the superpositions in equal terms. This is something we typically do not speak of in terms of the physical laws of reality. There is no hierarchy among superpositions. Billingsley and Danahy also utilize machine learning and artificial intelligence to generate new universes. This added level of complexity also raises the ultimate question of agency: Who has the power over the creation of a new tile, or in this case, a new superposition?

Choice and Conclusion

In the end, it all comes down to the physical reality and the human-specific point of view—the act of observation, which has been a considerable topic of discussion and debate in quantum physics. When observing an experiment, the scientists were baffled to find out that the act of observation itself influenced the outcome.[23] Humans have a very specific point of view and a way to comprehend superpositions. As Michalakis says, "We're all trying to figure out the plot of the universe by just watching the beginning and the end of the movie, the first and last frame. We're just reconstructing the in-between the best we

21 Jean Baudrillard, ***Simulacra and Simulation***, Sheila Glaser trans. (Ann Arbor, MI: University of Michigan Press, 1994), 19.

22 Alex Abad-Santos, "Everything Everywhere All at Once, Explained by a Quantum Physicist," ***Vox,*** April 15, 2022, https://www.vox.com/platform/amp/culture/23024945/everything-everywhere-all-at-once-multiverseexplained-quantum-physicist.

23 "What is Quantum Physics?" Caltech Science Exchange, accessed January 12, 2022, https://scienceexchange.caltech.edu/topics/quantum-science-explained/quantum-physics.

can. That's where the multiverse hides; it hides there in between frames."[24]

And while there may be infinite frames and infinite universes, just like there are infinite fragments in Kovacs' supermodel after three months of an infinite assembly process using infinite model-making techniques, and as much as there are infinite social media posts and searches to be displayed on Kim's *The Digital Mobius*, or Perry's infinite escapes from the real, or McCall's infinite split-second pixel roses, or Billingsley and Danahy's infinite computationally subdivided wilderness, there is also still, in that vast multiverse, a power of choice. That somewhere at a microscopic level, this reality defines you and your work: your scavenged miniature leaning Tower of Pisa, your one and only photograph of your studio when no one was around, your 0.4-second rendered image, your augmented reality or algorithm, and your identity as a citizen of this particular reality. It is not another parallel universe, not another simulation of another world, and not a dream, but this is the reality in which you made these choices. This is the reality that distinguishes you and your work from any other infinite versions of yourself. Somewhere else, you made different choices; but here you made this.

24 Alex Abad-Santos, "Everything Everywhere All at Once, Explained by a Quantum Physicist," *Vox*, April 15, 2022, https://www.vox.com/platform/amp/culture/23024945/everything-everywhere-all-at-once-multiverseexplained-quantum-physicist.

Bibliography

Abad-Santos, Alex. "Everything Everywhere All at Once, Explained by a Quantum Physicist." *Vox*. April 15, 2022.https://www.vox.com/platform/amp/culture/23024945/everything-everywhere-all-at-once-multiverse-explained-quantum-physicist
Aristotle. *Physics: Books III and IV*. Translated by Edward Hussey. Oxford: Clarendon Press, 1983.
Baudrillard, Jean. *Simulacra and Simulation*. Translated by Sheila Glaser. Ann Arbor, MI: University of Michigan Press, 1994.
Bird, Brad, dir. *Ratatouille*. Buena Vista, CA: Pixar Animation Studios, 2007.
Bress, Eric and J. Mackye Gruber, dirs. *The Butterfly Effect*. Burbank, CA: New Line Cinema, 2004.
Brown, Bill. "Thing Theory." *Critical Inquiry* 28, no. 1 (Autumn, 2001): 1–22.
Byrkit, James Ward, dir. *Coherence*. New York: Oscilloscope Laboratories, 2013.
Caltech Science Exchange. "What is Quantum Physics?" Accessed January 12, 2022. https://scienceexchange.caltech.edu/topics/quantum-science-explained/quantum-physics
Carroll, Lewis. *Alice's Adventures in Wonderland*. New York, NY and London, UK: Bloomsbury, 2001.
Einstein, Albert. "Concerning a Heuristic Point of View toward the Emission and Transformation of Light." *American Journal of Physics* 33, no.5 (May 1965): 2.
Harris, Richard. "Albert Einstein's Year of Miracles: Light Theory." National Public Radio: transcript and mp3 audio, 6:11, March 17, 2005. https://www.npr.org/2005/03/17/4538324/albert-einsteins-year-of-miracles-light-theory.
Kellner, Douglas. "Baudrillard, Semiurgy, and Death." *Theory, Culture & Society* 4, no. 1 (1 February 1987): 125–46.
Kwan, Daniel and Daniel Scheinert, dirs. *Everything Everywhere All at Once*. Los Angeles, CA: Ley Line Productions, 2022.
Lobell, John. "Quantum Theoretical Issues in Architecture: It's A Lot Stranger than We Think." *Tarp* 2 (Spring 2004): 20.
Nolan, Christopher, dir. *Interstellar*. Hollywood, CA: Paramount Pictures, 2014.
Nolan, Christopher, dir. *Memento*. Beverly Hills, CA: New Market Films, 2000.
Rigden, John S. "Einstein's Revolutionary Paper." *Physics World*, April 1, 2005. https://physicsworld.com/a/einsteins-revolutionary-paper/
Tykwer, Tom, dir. *Run Lola Run*. Berlin: X Filme Creative Pool, 1998.
Van Dormael, Jaco, dir. *Mr. Nobody*. Paris: Pan-Européenne, 2009.
Wachowski, Lana and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.
Wallis, John. *De Sectionibus Conicis*. Oxford, 1655.

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Dora Epstein Jones

An Spatio-Visual Regimes Spatial Essay

Do You Feel Anything Yet?

Or, Tuning In to the Real Promise of the Purple

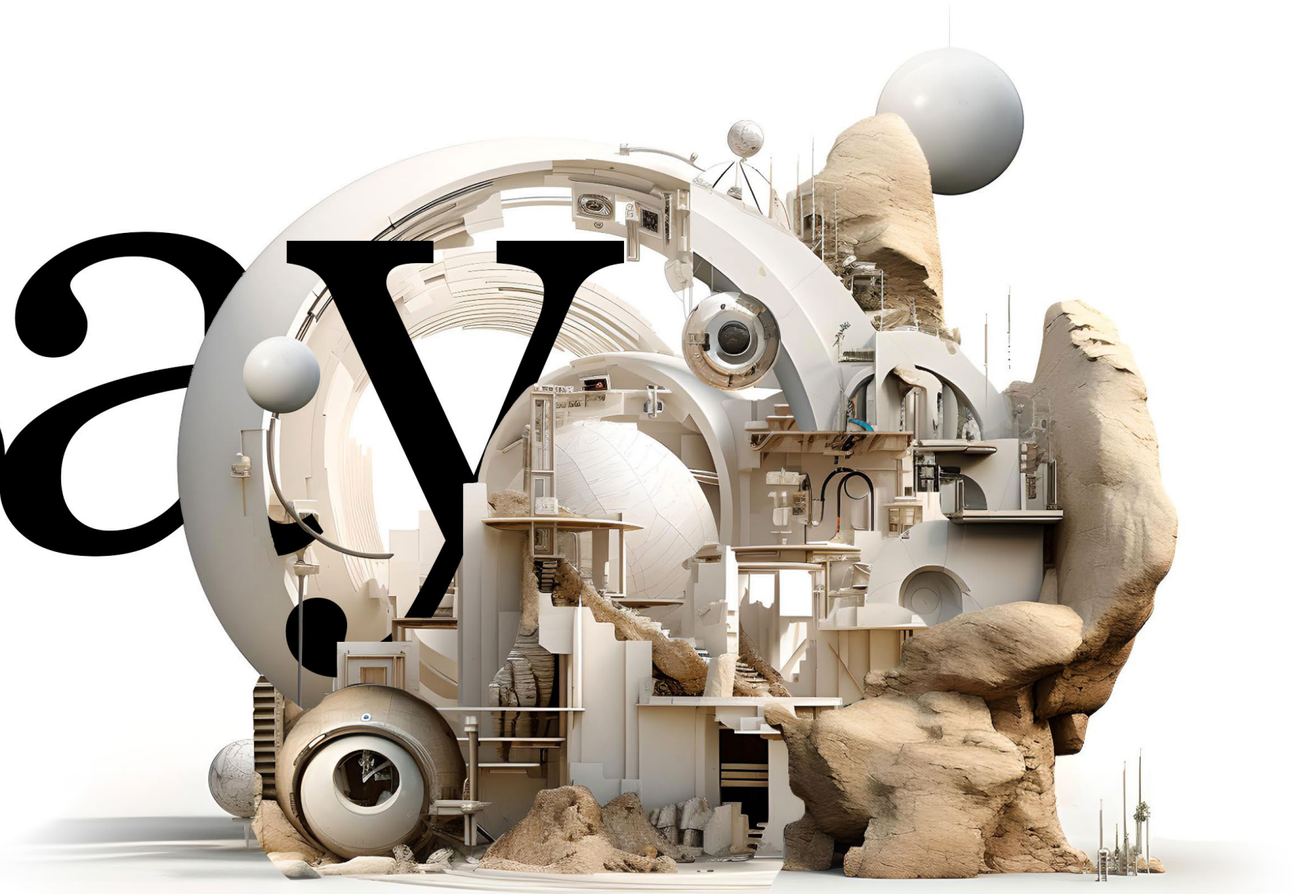
Discussing projects by

Daniel Bolojan
Andrew Saunders
Ferda Kolatan
Nate Hume
Iván Bernal, Keyla Hernandez, & Brendan Ho

Designed by Studio EP using MidJourney and Runway

October 3rd, 2023, 05:21 pm

Employing the keywords: [staged], [set design], post modern, shape, AI, detail, archaeology, machines, equity, [on white background]



Do You Feel Anything Yet?

Or, Tuning In to the Real Promise of the Purple

Dora EPSTEIN JONES

An Allusion to an Illusion

The premise of this book—*A Purple Architecture*—is a provocation. We understand the allusion to *The Matrix* (1999)[1] and the question posed to Neo (Keanu Reeves) from the palm of Morpheus' (Laurence Fishburne) hand. Do you take the red pill or the blue pill? The answer "purple" provokes us to imagine a third choice, or perhaps a spectrum of third choices. Not quite the ignorant stability of the red, just enough of the chaotic knowing induced by the blue. The (probably) happy medium. The (probably) right cocktail.

The allusion to *The Matrix* necessitates an allusion to Plato's allegory of the cave.[2] The red pill is to stay in the cave and to allow the shadow puppets of the Matrix to control our shared reality. The blue pill is the scary proposition of leaving the cave, seeing the puppet masters for what they are, but then risking; risking never knowing a reality again. The infinite space of unknowing. The vast plains of a perpetual inability to return.

Purple is more like a day job—leaving the cave and returning. Knowing that there is a shared reality, no matter how flawed and artificial, and still being able to operate within it, and even derive comfort from that (ugh) reality—hug your kids, kiss your spouse, buy a six-dollar oat milk latte, and endure the commute. Instead of one or the other, as offered by Morpheus, purple suggests having it both ways. Instead of a rather horrid choice between reality and The Real,[3] purple is more hopeful. Purple architecture suggests a way of working back and forth, and creating productive ties. Enhancing reality. Giving (temporary) rules of order to the chaos. Forging new legibilities.

Sounds nice, no? Going to admit though, on this side of the desk, it also sounds a lot like more postmodernity.

"Sounding like more postmodernity" is not an accusation. Indeed, postmodernity became unfairly pejorative. Surely, postmodernity implied that we had all somehow failed at modernity (the heroic architects most of all). We made promises about democracy and liberation, and then we made more mundanity[4] and more brutality.[5] Perhaps postmodernity felt like our little consequence. As a result, very few among us settled into postmodernity. We bought it as a temporary "waiting room" until the Anthropocene was over. Or, we dismissed postmodernity as an anxious symptom of being mostly modern.[6] In fact, postmodernity was sold with so many exceptions and qualifications, so self-consciously, that it was hard to define, let alone believe. Frederic Jameson called postmodernity "late Capitalism."[7] David Harvey, arguably the leading theorist of postmodernity, posited that postmodernity is a contrast to modernity, a rejection of modernist order in favor of flux, or as he put it "the fleeting and the fugitive."[8] In architecture, Charles Jencks, author of the canonical 1977 *The Language of Post-modern Architecture*,[9] liked a hyphenated "post-modernity," thus implying that the era was only an after-effect of modernity. The truth is that even though architecture truly excelled at establishing an aesthetic postmodernism (two words: Aldo Rossi), architecture culture, like most culture, wasn not ever really at home with the idea. Postmodernity seemed too unstable, too superficial, too trite, to quote Alanis Morrisette, "too ironic."

When the Twin Towers fell, or when computing became ubiquitous, sometime in the early aughts, many of us were eager to claim that postmodernity was over. The brilliant "histopomo" of the *Strada Novissima*[10] and Aldo Rossi had become the *decor de la vie* of development architecture everywhere. The digital realm transformed spectatorship and representation into active experiences and animate forms. Everything loose landed. And so, with the sweep of a hand, postmodernist aesthetics died a hundred deaths in a hundred published articles, and postmodernity was declared not-hot, unfashionable, done. The time consciousness introduced into and as modernity—from Charles Baudelaire's description of "Guys" in *The Painter of Modern Life* (1840)[11] to the "episteme" introduced in Michel Foucault's *The Order of Things* (1966)[12]—had become so self-assured, we easily declared an epoch's terminus, or even its beginning. In architecture, Y2K encouraged us to drop that ol' grumpy critical postmodernity, to feel rather than think, sense instead of critique, enjoy the mood and the flash-in-the-pan, and revel in a wild, if not pharmacological, formalism. The twenty-first century opened in party mode.

Now, even as the party wanes into the wee hours of the 2020s, the idea of a *longue durée* of postmodernity

1 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

2 For more information on Plato's allegory of the cave, refer to passages from *The Republic* written around 380 BCE.

3 It could be argued that the state of knowing that reality is constructed and you're "stuck in it" is the source of what Durkheim identified as "anomie" or "the malady of the infinite." Anomie leads to suicide because of the subject's continual inability to integrate or fit in, and that they know that they are non-integrated. The Real presents its own sublime dangers. No one recommends The Real. 0/10.

4 Essentially, Colin Rowe's argument in 1972 for why the "morale/word" of modernism was "bankrupt" was that it did not produce the "hoped for condition" of socialism, but rather it produced meaningless boxes. Colin Rowe, introduction to *Five Architects*: *Eisenman, Graves, Gwathmey, Hejduk, Meier*, by Peter Eisenman, Michael Graves, Charles Gwathmey, and John Hejduk (UK: Oxford University Press, 1975).

5 Some twenty years prior to Rowe, Siegfried Giedion's *Mechanization Takes Command* (UK: Oxford University Press, 1948) implied that modernism's greatest success (standardization) was also its greatest threat, akin to slaughterhouses and the mechanisms of devastating world war.

6 This is the basic argument of Bruno Latour.

7 Frederic Jameson, *Postmodernism, Or, The Cultural Logic of Late Capitalism* (United Kingdom: Duke University Press, 1991).

8 David Harvey, *The Condition of Postmodernity: An Enquiry Into the Origins of Cultural Change* (United Kingdom: Wiley, 1989).

9 Charles Jencks, *The Language of Post-Modern Architecture* (London: Academy Editions, 1984).

10 This refers to a 1980 exhibition organized by Paolo Portoghesi as part of the first international architectural exhibition of the Venice Biennale.

11 Charles Baudelaire, *The Painter of Modern Life and Other Essays* (London: Phaidon Press, 1863).

12 Michel Foucault, *The Order of Things* (New York: Knopf Doubleday Publishing Group, 1994).

is reviled. A special issue of *Log* in 2018 that I co-edited with Bryony Roberts brought a ton of concerned critics to our inboxes, many of whom were recoiling in horror that we might be suggesting "a return to postmodernism." In 2015, Dezeen launched a "Pomo Summer," wherein Sam Jacob proposed that those who critique postmodernism for its supposed "inauthenticity" are also those most threatened by critiques of superficiality, and yet also warned that postmodernism was a trap. Sean Griffiths took the discussion one step further, decrying the return of postmodernism as "politically dangerous." Adam Nathaniel Furman likened postmodernism to the resistance tactics of drag, but also said that it should be considered a "revival."[13] Very recently Joseph Bedford proclaimed "postmodernism is back," not just as a style but also as a political discourse that can be murky, if not possibly a tool of the alt-right.[14] The message communicated by these messengers is careful and cautionary, but also revelatory: perhaps our hubris disposed of postmodernity too quickly. After all, in the long span of time, even if it can fall into the wrong hands, even if we use a hyphen, even if it feels like a perpetual *unheimlichkeit*, a pervasive purpledom may not come to an end only because we wished it.

The favored, or most present, qualification on the "return" of an architectural postmodernity seems to be this: "Well, it's like postmodernity but without the ideology" (as in "all of the formalism and none of the guilt!"). And, given that none among us wants a return to the Marxist orthodoxy of someone like Manfredo Tafuri, and nor is Tafuri likely appropriate for our particular era, wherein the machines of capital are pervasive, the bitter fact remains that a real, live fascist and his "basket of deplorables" has come along—and Asians, Blacks, Jews, LatinX, Critical Race Theory, drag queens, immigrants, wombs, and small chocolate candies are all being violently and maliciously targeted. So, while the ideology of (early) postmodernity may no longer apply, and while we should be very clear that we have no wish to use postmodern relativism to support an alt-right agenda, we are still in postmodernity—as we should be. And artificial intelligence (AI) is here to help.

Tell-Tale Details

The first good clue of our continued postmodernity is the idea of the mix that permeates this book: blue and red combine to form a combinatory intermediate, purple. The alliance of purple to the postmodern conditions of "both/and" is indeed an easy shot. More to the point, a standard definition of postmodern would be its ontological mission: to challenge the status quo through a blurring of categories or distinctions. Blurred (or even smeared) red and blue make an ontological purple-ness and thus an inability to ever return to the supposed stability (purity) of primary colors. The status quo of the primary spectrum is undercut by purple, and the more purples, the shakier the primary position of the red and the blue become. Titling a book "purple" with the ontologically harsh "architecture" is an immediate challenge. Bringing that blur to the level of the detail is a much greater challenge.

In "The Tell-the-Tale Detail,"[15] an early postmodernist text, Marco Frascari used the detail as an index (the minimal unit) for signification. The detail was put forward as that which retains the loci or logos of architectural meaning, and, therefore, the very place where innovation, invention, complexity, and contradiction should be invited in a postmodern age. For Frascari, and early postmodernity, the focus on the detail is one that is intended to produce new object legibilities, especially object orientations of "a later use." While the text by Frascari is promising, and certainly rings with some excitement, the only recognizable goal he can envision is that offered by Scarpa or Rossi, that is, the purposeful displacement of the detail in order to evoke a different or complex legibility. Today, with the advent of artificial intelligence (AI), the discussion of details is one that invites, if not celebrates, total illegibility.

In *Creative AI in Architecture*, Daniel Bolojan reimagines the machine-work process to create impossible situations of details for Gaudi. He cunningly calls his project *Gaudi+NeuralNetworks*, invoking the additive, if not exponential, form of thinking that AI offers. In *Material Undecidability*, Nate Hume focuses his project on rough textures and encrusted relationships of joinery and construction. Both projects aim towards "impossible constructions," and in this, both projects seem to be aware of the linguistic, semantic sense of the "construction" more than any particular building detail as humanly imagined. Hume speaks of opening up a radically new ontological space between the smooth and the striated of material and details. Bolojan describes semantics as both levels and loops (see page 120).

In both cases, the "intelligence" portion of artificial intelligence is trained on the digestible catalog of architectural details. But, instead of producing a kind of material legibility or a phenomenological sense of details as the presencing of building, that is, the man-made world, the AI gives new eyes to new existences, ones that probably were not in the imaginary realm of people like Frascari. In Bolojan's *Gaudi*, the geometry of any one piece is not in relation to the essence or functionality of the whole. The vault is instead affected through a means of digital form-sensing, a cognitive loop between our eyes and the digital that subjectivizes experience without recourse to any ideal vault. The vault is not reducible to an arch; the arch is not reducible to any voussoir. It is an altogether different constructional existence. Even calling it a "vault" at this point seems absurd—perhaps as Gaudi had intended, it rises more out of dream than reality. For Hume, the detail is forced to confront its usual limit condition: the power, strength, durability, nature, and so on, of the material. Without a specific material referent, the detail becomes radically untethered from the role it usually plays as a temper to form-making. The "Devil" is thus purged from the detail. Frascari would be delighted!

New Archaeologies

Another reasonable clue that we are in an AI-assisted postmodernity is the return to, or of, history. The "just enough" revolution—not the red, not totally the blue either—is also a means of reconciling the authorial role of history. The obvious example from this grouping of projects is the stunning *Baroque Topologies*, a long and multilevel project by Andrew Saunders.

Like a great postmodernist might do (think perhaps Hayden White), Saunders subverts dominant paradigms of history and narrative. He uses historical "precedents;" yes, he even invokes the idea of the typology, a staunch ally of the postmodern critical project. However, for Saunders, it is an active history of memories around forms. Saunders reads his red and blue as a line between reality and simulacra, wherein both are too limited. Instead, he fable-izes/elaborates on the interrelationships between the imaginative realms. From here, he claims that such "epic non-fictional totalizing cartographical pursuits" (see page 204) are the agents of new innovations in representation, new spatial paradigms, new ways of seeing. *Baroque Topologies* thus undertakes not just representational techniques but entire knowledge/representation paradigms.

13 See Nicolas Kemper, "Just Don't Call It a Revival: Adam Nathaniel Furman Defends Postmodernism," *Common/Edge*, March 13, 2019, https://commonedge.org/just-dont-call-it-a-revival-adam-nathaniel-furman-defends-postmodernism/.

14 Joseph Bedford, "Postmodern Philosophy, Again," *New York Review of Architecture* 17 (December 2020).

15 Marco Frascari, "The Tell-the-Tale Detail" in *Semiotics 1981*, ed. John N. Deely and Margot D. Lenhart (New York: Springer, 1983), 325–36.

Indeed, this is the dream of Alberto Pérez-Gómez in *Architecture and the Crisis of Modern Science*,[16] a text that could not have been written without the critical perspective of postmodernity. Pérez-Gómez postulated that regimes might eventually tumble under the weight of many representational shifts, but, like Frascari, his prognostic powers were limited by (maybe) his contemporary technical milieu. Saunders now loads and layers representational paradigms generously, using AI to challenge and ultimately reject any proper number, any notion of vantage point, objective ocularity, the preferencing and privileging of any one visual mechanism, or the regulatory power of geometry. Instead, Saunders is happy to open the cupola into a visual Pandora's Box and thereby induce a fear that we can never go back to "the cupola" of architectural lore, and singular knowledge, again.

One can suppose that this "never knowing" could be akin to the specter of the postmodern relativism that scared so many off. As well, we could be inviting a new era of formal relativism. Saunders' provocation: that we are nearing a place with AI where the ontology problem and the author problem, as they had been previously described, are no longer sticking points for the privileging of certain views or paradigms. In other words, if any of this sounds like the debates between Tschumi and Eisenman of deployable tactical strategies of ontological subversion through multiple or undecidable authorship, it should and shouldn not. The projects presented here are all part of the *longue durée* of those debates. But, this time around, historical objects (artifacts) can collaborate endlessly with an automatic author. Imagine a formal relativism on steroids. Multiples of multiples, until such a point that any one historical referent is no longer discernible.

This use of history is not only formal. For Ferda Kolatan, the history is lived, and thus cultural. Open AI typically is "trained." The software is fed prompts, and from the prompts, produces four images. Four. Not one perfect one. Not one good one. Four. With the advent of Open AI, the possibility exists that endlessness is both the process and the point. Kolatan also invokes the notion of the fable, but in *Balat Bits*, the work is through the endless accruing of bits—rubble, dust, data, bricks, blocks, all of time and time forever more, "mixing, meshing, and merging" (see page 160). Kolatan opposes the binaries of old and new, preserved and renewed, with the accruement of bits as continuous differentiation. Unlike the relativism on steroids, *Balat Bits* exploits the potentials within the already embedded. The referent is not unknown in this case, but rather so overcome by its own detritus that it can no longer stabilize any original condition. *Balat Bits* actually contains the color purple, but the purple in the stuff of *Balat* appears not as a hue but as a shade. There is no primary role of the ontological red and blue, no mark of their blur or erasure, no memory of that history palimpsesting through the digital layers. Instead, like the *Baroque Topologies*, we reach the end of comprehension, a little bit of "I don't know what happened here" like movies that are shot in the dark, a vagueness at the edges, not-total recall.

For these projects, the life of forms becomes an almost limitless set of pantone colors—still a catalog, still numbered, but numbered like the stars—constantly holding out for the colors we haven't discovered yet. An earnest cosmology (one can imagine this conversation as a parody, maybe starring Owen Wilson, who is asking, with a practiced faux-earnestness itching close to academic bullshit, ahem ideation: "But, is it purple or is it violet? Is the violet really mauve? Are two purples even alike?") At the philosophical level, of course, creative AI invites a kind of silliness, but at the level of architectural design—from the nascent sketch to the built environment to the "I have no idea what I'm looking at, and I might like it"—a vast, if not infinite, range of limitless unknowable realities is one heck of a tactic. And, as in our long postmodernity, a tactic (finally!) set to implode the condescending knowability of master narratives.

16 Alberto Pérez-Gómez, *Architecture and the Crisis of Modern Science* (Cambridge, MA: The MIT Press, 1983).

Architecture in the Age of (More) Intelligent Machines

Nate Hume refers here to postmodernity at a "point of exhaustion" (see page 120) but let us suppose that no matter how tiring an age gets, we are still stuck in it. If Foucault could conceive of modernity as the "Great Confinement,"[17] so maybe postmodernity is the Great Parole—the ankle monitor of modernity, the checking in, the peeing, and liberation in sight. Like most epochal moments, the extension of the project involves an accompanying *techne*. This time, with AI, we have a heartfelt but rather embarrassing admission that human knowledge was or is not enough for the universe. Or that human knowledge is exactly that which imposes an order that it must in turn police. Ugh! No wonder we are so tired.

Of course, if we put our phones down long enough, we can see that there is no longer a war between machines and humans but instead a being with machines, a kind of comfortable delegating of tasks and chores, vacuuming, sending messages, restocking the fridge. Along with a being with machines, we attach a careful/reckless de-essentializing of formerly human-based activities. "Performing a search" for example, or writing. Certainly, "using history" or "re/de-attaching signifiers" could be considered fairly typical now of human epochal end-times behavior, whether accidentally, virally, or through ChatGPT, and we can also say that AI has now produced both. Indeed, the key is not whether the latest version of our machine friends (AI) will produce more intelligence, for it surely will, but rather how we use the intelligence, and if we use the intelligence.

Of course, the blurring, the purpling, might become boring (and given the histories of successive avant-gardes, that might be the point!), and other strategies may yet emerge in this positively glacial wait-time until modernity finally discharges us. But at this time we can harness the capabilities of the swarm. At a recent conference, *Architecture After AI*[18] at University of Texas, Austin, Andrew Kudless asserted that AI is the only tool that truly expands the imagination, while Ed Keller speculated that talking to AI is a little like talking to aliens. Both suggested that AI can reveal "an ecology of ontologies" that we have yet to generate. In this volume, Daniel Bolojan likens AI to "hunting a needle in a haystack that is constantly changing," and "a malleable, ever-learning and ever-evolving space of possibilities" (see page 76).

For Bernal, Hernandez, and Ho, the "flicker" and the "misfit" operate as Freudian slips on a single oppressive or overarching reality. They discuss the possibilities of AI as a rejection of one guiding "normal reality," "its regularity, and standardization" (see page 58) in favor of divergent realities, as many divergent realities as diversity supports. They offer the fantastic as the plain truth of the overlapping situatedness that produces meaning now—machines that occupy buildings, buildings that appear and reappear. For them, the standard acceptable guidelines for existence are no longer relevant. This is not existenz minimum. It is not existenz at all. At least not in the terms that had promulgated the social contract.

Exciting! Yes! But, here's the hitch: "Living in postmodernity," even "living in postmodernity with machines," demands that we continuously challenge the status quo through a blurring of categories and/or distinctions to overthrow that status quo, to make its power and privilege no longer tenable. There may be plenty of reasons why we breathed a sigh of relief when we thought or claimed that postmodernity is over, but the one that needs to keep us up at night is that normative, cis, whiteness didn not and doesn not want to be overthrown. Yes, we are headed into the Anthropocene, and yes, once that happens, some of these questions will not matter much. But, as long as we are still here, and

17 Confinement or "the totality of measures which make work possible and necessary for all those who could not live without it." Michel Foucault, "The Great Confinement," in *Madness and Civilization* (London: Routledge, 1971), 46.

18 *Architecture After AI* was an exhibition and one-day symposium in early 2023 at The University of Texas at Austin School of Architecture. The events were curated by Kory Bieg, Daniel Koehler, and Clay Odom.

the planet is burning, all of the pressing human questions will only be made worse by environmental injustice and inequality everywhere. Continuing to call this era "postmodernity" may rankle the fur, but discomfort is, and should be, the point.

When bell hooks[19] confronted the issues of postmodernity, she recognized that the "decentered subject" and the discourse on "Otherness" produced a hopeful tone. Of course, hooks was wise to the fact that the majority of that discourse was still mostly white. Still, she connected the promise of postmodernist discourse fruitfully to the yearning described in her book. To quote:

> Much postmodern engagement with culture emerges from the yearning to do intellectual work that connects with habits of being, forms of artistic expression, and aesthetics that inform the daily lives of writers and scholars as well as a mass population. On the terrain of culture, one can participate in critical dialogue with the uneducated poor, the black underclass who are thinking about aesthetics. One can talk about what we are seeing, thinking, or listening to; a space is there for critical exchange.[20]

So, given that the promise of critical discourse is still hanging in the air, more or less promised but horribly under- and un-delivered, let us take up the agency of this moment, let us make that the goal of an endless stream of images. Continuous differentiation. Not Otherness, but difference *in extremis*. No single reality for white supremacy to control.

If 1968 was the benchmark year for the introduction of a postmodern age, then we are nowhere near the aims of that era: no closer to an equal rights amendment for women (yeah, remember that?), no closer to the emancipation of farmworkers, no closer to the revolutionary vision of MLK Jr., miles away from bell hooks, aching acres away from Angela Davis. Black boys are still being killed by the police. Migrants are still being starved at the border. So, purple is liberatory, queer, lavender. Purple is the color of a culture that modernized on their terms rather than on the terms of a European hegemony. Purple is both red and blue. So, the real spell or pharmacological effect of purple will be when "status quo" is no longer relevant or valid, or perhaps, the authority that is required to establish and maintain a status quo really just can not manage it all anymore. Master narratives work great as long as they are told and disseminated within the context of a master reality. Luckily, master narratives fall to pieces when no one cares, no one pays attention, or they possibly (possibly) cave to far too many realities to keep maintaining their absurd propositions.

A purple stain on the foundation of a house is cause for some alarm. Purple mold is telling of water damage or a toxic variant. However, some purple mold is penicillin (not many). And, penicillin can cure infectious diseases. It is not a great analogy, sure, but the point is not every visual effect is merely only visual, and it follows that not every formalism is only formalist. Due to its literal "out of the box" thinking, artificial intelligence can be used for more than new aesthetics—it can be harnessed to help humans out of the knotty problems of establishing equity in a world still dominated by capitalism. AI can help us sustain a diversity that could care not a whit about power, can resolve whatever scary scenario that white, cis, male privilege has concocted in its feeble brain. It can maybe, just maybe, eliminate the "normal reality" that has prevented us from fulfilling the true promise of postmodernity.

19 bell hooks was the pen name of author Gloria Jean Watkins.

20 bell hooks, "Postmodern Blackness," in Y*earning: Race, Gender and Cultural Politics* (Boston: South End Press, 1990), 31.

Bibliography

Baudelaire, Charles. *The Painter of Modern Life and Other Essays*. London: Phaidon Press, 1863.
bell hooks. *Yearning: Race, Gender and Cultural Politics*. Boston: South End Press, 1990.
Foucault, Michel. *Madness and Civilization*. London: Routledge, 1971.
Foucault, Michel. *The Order of Things*. New York: Knopf Doubleday Publishing Group, 1994.
Frascari, Marco. "The Tell-the-Tale Detail." In *Semiotics 1981*, edited by John N. Deely and Margot D. Lenhart, 325–36. New York: Springer, 1983.
Harvey, David. *The Condition of Postmodernity: An Enquiry Into the Origins of Cultural Change*. United Kingdom: Wiley, 1989.
Jameson, Frederic. *Postmodernism, Or, The Cultural Logic of Late Capitalism*. United Kingdom: Duke University Press, 1991
Jencks, Charles. *The Language of Post-Modern Architecture*. London: Academy Editions, 1984.
Museum of Modern Art. *Five Architects: Eisenman, Graves, Gwathmey, Hejduk, Meier.* Oxford: Oxford University Press, 1975.
Pérez-Gómez, Alberto. *Architecture and the Crisis of Modern Science*. Cambridge, MA: The MIT Press, 1983.
Wachowski, Lana, and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.

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Stephen Caffey

An Spatio-Visual Regimes Immersive Essay

Purpurations

Ludicities, Quiddities, and Scalarities

Designed by Studio EP
using MidJourney

June 7th, 2023, 04:53 pm

Employing the keywords: [staged], architecture, ludicity, semiosphere, metaphysics of the virtual, post-aesthetic, [on white background]

Discussing projects by

Damjan Jovanovic & Lidija Kljakovic
Joseph Altshuler
Yara Feghali
Julia Koerner
Jason Vigneri-Beane

Purpurations

Ludicities, Quiddities, and Scalarities

Stephen CAFFEY

The n^{th}-Order Post-Aesthetic

In 1942, a year before his death, pianist, composer, and modernist painter Joseph Schillinger completed the manuscript for *The Mathematical Basis of the Arts* in which he proposed the "post-esthetic," privileging objective analysis and mathematical structure over subjective affect, as the evolutionary culmination of human creative expression. First published in 1948, the book codified five material, technical, and morphological zones.[1] Substituting architecture for art in Schillinger's zone model, the emergent state of computational design and superordinate operations reads, "Analysis and synthesis of architectural product. Scientific experiment. Architecture with a scientific goal. Scientifically functioning architecture. Manufacture, distribution, and consumption of a perfect architecture product. Fusion of architecture materials and architecture forms. Disintegration of architecture. Abstraction and liberation of the architecture idea."[2] Through the various processes and under the aegis of the theoretical and critical apparatuses implemented in this volume, Schillinger's originary analogic-mechanistic of the Third Industrial Revolution diversifies by several orders of magnitude to an n^{th}-order post-aesthetic of Fourth Space.[3] As tools in speculative, creative-expressive workflows, architecture algorithms and computational processes augment individual human architects. Algorithms virtualize, augment, blend, and extend suprarversal realities, deploying real-time user data analysis to create personalized and adaptive (and thus mutually constitutive) experiences. New and unique forms of spatial intelligence expand and diversify the ranges of human cognitive and perceptual vernaculars through post-digital mechanisms within posthuman conditions to defy predominant modes of representation, signification, vision, and seeing.

Ludicities

The Cloud Garden playable simulation situates humans as ludicist domains of centripetal-centrifugal vortices. Each operation distances the player from epistemic self (centrifugal), while simultaneously and superpositionally feeding data to the ontic self (centripetal). This simultaneity of divergence and convergence balances on the edge of what communications scholar Maria Conceição Lopes calls a "conceptual horizon for. . . human and social ludicity."[4] The conceptual horizon draws on cultural theorist John Huizinga's *Homo Ludens*,[5] which characterizes play as an essential feature of thriving societies, psychologist Paul Watzlawick's communication-based codification of problem formation and problem solution, and philosopher Ludwig Wittgenstein's model of family resemblances—similarities within a broader and not clearly defined term such as "games." In *The Cloud Garden*, the image-captured renders serve as the handcrafted technical objects, declaring autonomy by straddling binaries, polarities, and dichotomies and freeing the architect-player and the allied machine vision from the tyrannical monoculture of seeing.[6]

Objecting Agencies

Though explicitly focused on architectural toys and, by association, with ludicity, *Purple Playthings* mostly evades Lopes's conceptual horizon. Within each of the four presented examples, the project's cast of characters deliver performances staged in photographs and video. Whether temporally static or spatially time-based, the visual representations resonate with tensions of the epiphenomenal. The photograph of the carefully curated hybrid objects is not the work. The video of the locomotive objects is not the work. Rather, the representations temporarily concede to the perceptual and cognitive desires of the architect-player to know that the objects could perform or that they may have performed, invoking photographs of Joseph Beuys's *How to Explain Pictures to a Dead Hare* or a video recording of Yoko Ono's *Cut Piece*. Whether improvised or rigorously scripted, the objects and the sets performed/will perform the play and played/will play as performance. The architect-player cannot know whether the objects break character, but as the bursting seams and blurred edges abrade the regulatory grids, rectilinear forms, and ithyphallic landscapes, randomized associations begin to surface. *The Portmanteau Portmanteau* hybrids grow increasingly exhausted as they await their Godot. *The Stumbling Stairs* envision themselves as performing set pieces in a Yoann Bourgeois production, while secretly and ritually smoothing the striated space that perpetually struggles to contain them. The *Vax-Chi-Nation* cast of buildings waits for the next song to begin before pushing the limits of socially distanced dancing while the unmasked figures listen, watch, and chatter. The architect-player hovers—literally and figuratively—between *fukinuki yatai* 吹抜屋台 (the ripped-off roof effect in such productions as the eleventh-century novelist Murasaki Shikinu's *The Tale of Genji*[7] and the floating world, aerial perspective of seventeenth-century prints known as *ukiyo-e* 浮世絵). *Sink Your Teeth into Dessert's* reflective foil-wrapped candies stifle their giggles, hold their breath, and play dead while the seated and swinging figures try to distract the architect-player from the real contents of the piece: the quiddity of absence hiding in the pipes. Situated and situating in a flattened plane of immanence, *Purple Playthings* activates a complex of multivalent relational aesthetics. In their explicit and implicit extradiegetic collaborations, the sets, grams, and configurations neither privilege nor subordinate the anthropocentric gaze, but they do invite the architect-player to join them backstage and off-camera to audition for a spot on the matrix of Action-Gram-Puppet-Sets.

Fissile Forces

Nonhierarchical planes of immanence feature prominently, albeit quite differently, in *Inhabiting Indefiniteness*. Each point on the breaching scope diagram doubles as a discrete object, a fissile

1 Joseph Schillinger, *The Mathematical Basis of the Arts* (New York: Philosophical Library, 1948), 17.

2 Ibid., 17.

3 See Luciano Floridi, *The Fourth Revolution: How the Infosphere is Reshaping Human Reality* (Oxford: Oxford University Press, 2014); Daniel Hardegger, "Towards a Merging of Spaces: A 'holistic concept' for the emerging '4th Space,'" (The 2021 Summit of the International Society for the Study of Information, online, September 14–19, 2021); and Piotr Boltuc, "The 4th Space as Reality," *Proceedings* 81, no. 1 (June 2022): 151.

4 Maria Conceição Lopes. "Ludicity. A theoretical Horizon for Understanding the Concepts of Game, Game-Playing and Play." In the *Proceedings for the 2nd European Conference on Games Based Learning*, ed. Thomas Connolly and Mark Stansfield (Paisley, UK: Academic Publishing International, 2008). 279.

5 Johan Huizinga, *Homo Ludens: A Study of the Play-Element in Culture* (Boston: Beacon Press, 1955).

6 This service takes on especially pronounced relevance in the duo's lifeforms.io projects.

7 Murasaki Shikibu, *The Tale of Genji* (New York: Vintage, 1990).

threshold across which the player of *The Island* code-switches perceptually and corporeally from one identity to the next, partially occupying both without fully occupying one or the other. This plane of immanence is a flattening plane, its ontological state one of becoming rather than being. Souvenir photos from *The Island* adorn the walls of the VR Lab, deepening the digital twinning demarcated by the floor and guardian boundary but also intensifying the auditory puncture triggered by recognizable voices. Though she cannot see them while wearing the headset, Nura knows that the images on the lab walls are there, sees them in her mind's eye, and feels their presence through the reflected radiance of their bright color palette on the distributed intelligence sensors in her skin, just as she hears her colleagues' voices. The players' bodies are "both embedded and embodied, and have relational and affective powers."[8] Enacting the cyberfeminist challenge to the fallacies of technological neutrality and undermining the concomitant prejudices and power imbalances inherent to data training sets, Nura bridges the chiral divide and, despite the fact that observers register her breaches as successive, her perceptual and cognitive operations instead collapse fissures onto each other. The neighborhoods, colors, forms, avatars, and cyclically stacking temporal fissures collect on the unstable border between the physical and virtual in becoming-space. New modes of communication and community building revoke traditional forms of definition, description, and representation in a post-digital, post-public sphere.[9] Dis/embodied simultaneities, nonpredatory models of exchange, teleportation, and collective action on *The Island* with collaborators whose avatars lack clear gender expression rupture the guardian boundary without abandoning the collective. *The Island* presents as a cyberfeminist Third City free from androcentric conventions that distinguish both technology and architecture as fundamentally hierarchical, patriarchal, and colonialist enterprises.[10]

Biomimetic Scalarities

Operating at a more intimate scale than *Inhabiting Indefiniteness*, the personal adornments featured in *[fabric]* deterritorialize and deracinate brick-and-mortar-flesh-and-bone space and inforg space, both of which inhabit the materialistically explicable, though epiphenomenal, status of the virtual.[11] As biomimetic integuments, the garments and accessories both index and perturb the nonexistent boundary between the wearer and the external world.[12] Explicit acknowledgment of the hundreds of hours of labor from which Koerner's recursive syntheses of polygonal scaffolding, Haeckel's *Kunstformen der natur*,[13] and Voronoidal segmentation emerge de-fetishizes and de-hypostatizes dress, jacket, and clutch.[14] These objects participate, rise up, speak back, and alter *le partage du sensible*. The digital setae mimic the visually enigmatic effect/affect of the insect wing, illustrating the surface of a textile substrate that delivers information to the wearer's somatosensory cortex, paralleling the afferent modalities of the referent species.

8 Rosi Bradiotti, *Posthuman Knowledge* (Cambridge: Cambridge University Press, 2019), 42.

9 See Philip Schlesinger, "After the Post-Public Sphere," *Media, Culture & Society* 47, no. 7–8 (2020): 1545–63.

10 "Third City" first appeared as an alternative to conventional urban spaces and geographical in *The Cyberfeminist Manifesto for the 21st Century* (VNS Matrix, 1991).

11 See Luciano Floridi, *Philosophy and Computing: An Introduction* (London: Routledge, 1999); and Boltuc, "The 4th Space as Reality," *Proceedings* 81, no. 1 (June 2022).

12 Patricia Flanagan, "Critical and Speculative Wearables: Boundary Objects," in *Design, User Experience, and Usability: Designing Pleasurable Experiences: 6th International Conference, DUXU 2017, Lecture Notes in Computer Science 10289*, ed. Aaron Marcus and Wentao Wang (Cham: Springer, 2017), 668.

13 Olaf Breidbach, *Art Forms in Nature: The Prints of Ernst Haeckel* (Munich: Prestel Publishing, 1998).

14 Zahi Zalloua, *Being Posthuman: Ontologies of the Future* (London: Bloomsbury, 2021), 190.

Through mechanisms of epigenetic memory, the wearer's skin connects across space and time, across the fallacious boundaries between culture and nature, real and virtual, physical and digital. Body memory stored deep in the wearer's DNA catalyzes these quantum entanglements, linking designer, computer, 3D printer, skin, textile, and central nervous system. As nucleotide data storage containers, and as ancestral objects in pre-Cartesian and non-Euclidian wildernesses, these networks invoke spooky action at a distance more than rhizome or radicant.[15] In its discrete gestures of creative expression and cultural production, Koerner's work insinuates itself into an autopoietic "visceral hedonic rhetoric framework," substituting for its epistemic burdens the ontological prospects of entangling DNA with wilderness forms to translate and scale the donned to the occupied, the adorned to the inhabited, and the clutched to the fully sheltered.[16]

Tagmata Tarkāḥ

Cephalon C_X.AR discounts the scalar. *Cephalon C_X.AR* sprays mereological inventories into an expanding, but not necessarily flattened, diffusion model orthoplex of holarchic immanence. *Cephalon C_X.AR's* cyborgs detect objects not by their sensible presence, but by the pseudo-entropic energy pulses released when objects-as-machines-as-beings unconsciously couple, decouple, and recouple. Manifold forces saturate these cyborg ecologies' discrete and collective semiospheric conditions, sparking vacillations of indeterminacy: content or context? Both? Neither? Something else altogether?[17] The resulting mystifications "possess no physical forms of their own but instead generate a visual interpretation of themselves for the purpose of dealing with organic lifeforms, if their task requires a physical representation" to fabricate ontological polysemy.[18] Human optical cortices process the machine-vision *Cephalon C_X.AR tagmata* (heads) as *tarkāḥ*, reflections that do not generate certainty, that seek to determine whether an "under-informed object has a specific property or not," and seek to validate options through detection of logical fitness or a lack of logical fitness that might lead "the cognizing subject to something undesired."[19] But because cyborgs challenge all dualisms, and in particular the subject-object dualism, the Cephalon *tagmata tarkāḥ* blur such "that it is not clear who makes up what part of where the division begins or ends between one and the other," subordinating

15 For the ancestral object, which refers to objects that predate the emergence of human consciousness, see Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, trans. Ray Brassier (London: Continuum, 2008). "Spooky action at a distance" (today known as quantum entanglement) first appeared in Albert Einstein, Boris Podolsky, and Nathan Rosen, "Can Quantum-Mechanical Description of Physical Reality Be Considered Complete?" *Physical Review* 47 (1935): 777–80. Gilles Deleuze and Félix Guattari explore the botanical concept of the rhizome root system as a model for nonhierarchical human networks in *A Thousand Plateaus: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987). Nicolas Bourriaud's *The Radicant*, trans. James Gussen and Lili Porten (New York: Lukas and Sternberg, 2009) takes a comparable approach, emphasizing dynamic, nonlinear, and nonhierarchical processes across all forms of cultural production.

16 See Cara Wrigley, "Design Dialogue: The Visceral Hedonic Rhetoric Framework," *Design Issues* 29, no. 2 (2013): 82–95; Karen Barad, *Meeting the Universe Halfway: Quantum Physics and The Entanglement of Matter and Meaning* (Durham, NC: Duke University Press, 2007), 139.

17 See Juri Lotman and Wilma Clark, "On the Semiosphere," *Sign Systems Studies* 33, no. 1 (2005): 205–29. Lotman proposes the semiosphere as participant in dialogue and the space within which the dialogue takes place.

18 "Cephalon," Warframe Wiki, accessed February 6, 2023, https://warframe.fandom.com/wiki/Cephalon

19 Nirmalya Guha, "Tarka as Cognitive Validator," *Journal of Indian Philosophy* 40, no. 1 (February 2012): 47–66.

anthropocentric desire to cyborg desire.[20] The human, nonhuman, ahuman, and more-than-human entities that populate *Cephalon C_X.AR* "can be redefined constantly, but in a manner that includes all. . . previous redefinitions and is compatible with them."[21] Cyborg selves and their discrete and collective ecologies remain temporally, spatially, and materially membranic.

Purpurations and Supervenient Superposition

Hyper-ludicity and contra-ludicity introduce low-stakes volatility into the architect-player gaming space, diminishing the conventions of what professor and game designer Ian Bogost terms the "procedural rhetoric" of game mechanics.[22] New and distinct forms of spatial intelligence expand and diversify the ranges of human cognitive and perceptual vernaculars to defy predominant modes of representation, signification, vision, and seeing. Purpuration frees the architect to explore "the entirety of vertical and horizontal relations of [architectural] abstraction and signification. . . as the domain in which supra-sensuous 'things' acquire a life of their own."[23] Architectural purpuration blends real-world and virtual objects, operations, and images, incorporates real-world data, such as dimensionality and materiality, and privileges real-time simulation to inform and optimize responsive physical prototypes. Self-supervising tools catalyze seamless interpenetrations between the virtual and the physical, mix and extend inter- and intra-reality interfaces to sense, manipulate, and scale virtual models without regard for anthro-suprematist notions of being and time, populate data training sets for unpredictably novel generative design solutions, blur boundaries between neuron and qubit—instantiating new possibilities for re/generative form-finding and post-anthropocentric optimization. As Rosi Bradiotti notes, "Posthuman subjects are a work-in-progress; they emerge as both a critical and a creative project within the posthuman convergence along post-humanist and post-anthropocentric axes of interrogation."[24] From birth, human and posthuman subjects train on large data sets that normalize and domesticate one worldview to the exclusion of others. Coding languages, gaming engines, data training sets, diffusion models, computer hardware, architectural disciplinarity, and Capitalocene αἴσθησις (*aísthēsis*—the full sensory and emotional experience of "reality") privilege Anglophone hegemonic worldview, reinforce globalization (at the expense of globalism), and colonize immersive environments.[25] The urgency of diversifying (and thus elevating the quality of) data both mirrors and parallels the need to diversify and elevate the quality of data training sets for human and posthuman subjects. Games, simulations, and mixed and extended reality promise new places and new spaces within which and against which to augment introspection, to augment intentionality, and to cultivate an ever more humane posthuman condition that "unsettles the primacy of the 'humanist' subject and catalyzes inventive ways of seeing," thinking, and being.[26]

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20 Steve Gennaro and Douglas Kellner, "Digital Culture, Media, and the Challenges of Contemporary Cyborg Youth," in *Bioinformational Philosophy and Postdigital Knowledge Ecologies*, eds. Michael A. Peters, Petar Jandrić, and Sarah Hayes (Cham: Springer Nature, 2022), 233–34.

21 Rein Raud, *Being in Flux: A Post-Anthropocentric Ontology of the Self* (Cambridge: Polity Press, 2021), 193.

22 Steven Conway, "Hyper-Ludicity, Contra-Ludicity, and the Digital Game," *Eludamos* 4, no. 2 (2010): 135–47; Ian Bogost, *Persuasive Games: The Expressive Power of Videogames* (Cambridge, MA: The MIT Press, 2007).

23 Sami Khatib, "Sensuous Supra-Sensuous: The Aesthetics of Real Abstraction," in *Aesthetic Marx*, ed. Samir Gandesha and Johan F. Hartle (London: Bloomsbury, 2017), 69.

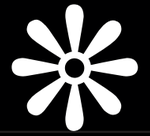
24 Rosi Bradiotti, *Posthuman Knowledge* (Cambridge: Cambridge University Press, 2019), 41.

25 See Jason W. Moore, ed., *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism* (Oakland, CA: PM Press, 2016).

26 Zahi Zalloua, *Being Posthuman: Ontologies of the Future* (London: Bloomsbury, 2021), 191.

Bibliography

Barad, Karen. *Meeting the Universe Halfway: Quantum Physics and The Entanglement of Matter and Meaning*. Durham, NC: Duke University Press, 2007.
Boltuc, Piotr. "The 4th Space as Reality." *Proceedings* 81, no. 1 (June 2022): 151.
Bradiotti, Rosi. *Posthuman Knowledge*. Cambridge: Cambridge University Press, 2019.
Breidbach, Olaf. *Art Forms in Nature: The Prints of Ernst Haeckel*. Munich: Prestel Publishing, 1998.
Hardegger, Daniel. "Towards a Merging of Spaces: A 'holistic concept' for the emerging '4th Space'." Paper presented at The 2021 Summit of the International Society for the Study of Information, online, September 14–19, 2021.
Flanagan, Patricia. "Critical and Speculative Wearables: Boundary Objects." In *Design, User Experience, and Usability: Designing Pleasurable Experiences: 6th International Conference, DUXU 2017, Lecture Notes in Computer Science 10289*, edited by Aaron Marcus and Wentao Wang. Cham: Springer, 2017, 656–72.
Floridi, Luciano. *The Fourth Revolution: How the Infosphere is Reshaping Human Reality*. Oxford: Oxford University Press, 2014.
Guha, Nirmalya. "Tarka as Cognitive Validator." *Journal of Indian Philosophy* 40, no. 1 (February 2012): 47–66.
Huizinga, Johan. *Homo Ludens: A Study of the Play-Element in Culture*. Boston: Beacon Press, 1955.
Jago, Mark. "Supervenience." In *Routledge Encyclopedia of Philosophy*. Routledge, 2018. https://doi.org/10.4324/0123456789-n057-2.
Khatib, Sami. "Sensuous Supra-Sensuous: The Aesthetics of Real Abstraction." In *Aesthetic Marx*, edited by Samir Gandesha and Johan F. Hartle, 49–69. London: Bloomsbury, 2017.
Lopes, Maria Conceição. "Ludicity. A theoretical Horizon for Understanding the Concepts of Game, Game-Playing and Play." In the *Proceedings for the 2nd European Conference on Games Based Learning*, edited by Thomas Connolly and Mark Stansfield. Paisley, UK: Academic Publishing International, 2008, 275–84.
Moore, Jason W., ed. *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism*. Oakland, CA: PM Press, 2016.
Panagia, Davide. *Ten Theses for an Aesthetics of Politics*. Minneapolis: University of Minnesota Press, 2016.
Peters, Michael A., Petar Jandrić, and Sarah Hayes, eds. *Bioinformational Philosophy and Postdigital Knowledge Ecologies*. Cham: Springer Nature, 2022.
Raud, Rein. *Being in Flux: A Post-Anthropocentric Ontology of the Self*. Cambridge: Polity Press, 2021.
Reader, John, Petar Jandrić, Michael A. Peters, Ronald Barnett, Marcin Garbowski, Veronika Lipińska, Sharon Rider, et al. "Enchantment - Disenchantment-Re-Enchantment: Postdigital Relationships between Science, Philosophy, and Religion." *Postdigital Science and Education* 3 (2021), 934–65.
Schillinger, Joseph. *The Mathematical Basis of the Arts*. New York: Philosophical Library, 1948.
Schlesinger, Philip. "After the Post-Public Sphere." *Media, Culture & Society* 47, no. 7-8 (2020): 1545–63.
Shikibu, Murasaki. *The tale of Genji*. New York: Vintage, 1990.
Watzlawick, Paul, John H. Weakland, and Richard Fisch. *Change: Principles of Problem Formation and Problem Resolution*. New York: Norton, 1974.
Wrigley, Cara. "Design Dialogue: The Visceral Hedonic Rhetoric Framework." *Design Issues* 29, no. 2 (2013): 82–95.
Zalloua, Zahi. *Being Posthuman: Ontologies of the Future*. London: Bloomsbury, 2021.



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Ryan Scavnicky

An Essay

Spatio-Visual Regimes Metavirtual

Let Them Have Meta-Virtuality

A Slice of the Hyperreal

Discussing projects by

Alayna Davidson
Galo Canizares & Stephanie Sang Delgado
Ebrahim Poustinchi & James F. Kerestes
Behnaz Farahi

Designed by Studio EP
using MidJourney and
DALL.E.

June 7th, 2023, 05:47 pm

Employing the keywords:
[staged], meta-virtual,
mediated space, media,
hyperreal, uncanny valley,
[on white background]

Let Them Have Meta-Virtuality

A Slice of the Hyperreal

Ryan SCAVNICKY

Meta-Virtuality

> I take a couple uppers, I down a couple downers.
> But nothing compares to these blue and yellow purple pills.
> I've been to mushroom mountain. Once or twice, but who's countin'?
> But nothing compares to these blue and yellow purple pills.
> –D12, *Purple Pills*[1]

Take the purple pill. Follow the white rabbit. These descriptive expressions beckon us to alter our understanding of what is real. Turns out this is not accomplished with magic, but by shattering the perception of something we take as a given. In modern history, architecture's medium was pure space. But there is no such thing as pure space. There is only mediated space—our shared physical environment overlaid with meanings from the way it is produced and subsequently memorialized via media. So, when a project site includes physical space mixed with digital space, architecture has to explore new strategies of making. The projects in this group share an attitude called meta-virtuality,[2] whereby they achieve agency by knowingly exploiting the gap between what is real and what is virtual. Before we get to why this attitude is so crucial, let us first venture into a few other creative disciplines that have experienced mixing real and virtual realities.

On July 8, 2020, the Turkish bakery Red Rose Cake & Tuba Geçkil shared a video on Instagram showing the first cut into some recent cakes they had made. But something was off: you see the video shows someone holding a knife to a pair of red Crocs, and then a roll of toilet paper, and then a houseplant. One by one, the everyday object before you is cut into and revealed to be cake (see Figure 1).

Figure 1. @redrosecake_tubageckil "They made a nice video with my cakes thanks," (2020).[3]

The post, and the subsequent mention by Tasty on Twitter, was enough to spark a new genre of content questioning what we, society, expect cake to look like. The practice has transformed into the cultural phenomenon now known as hyperreal bakery, where something unexpected or quotidian is revealed as an edible treat.

Exactly who coined the term is unknown, yet "hyperreal" is the same word Jean Baudrillard chose in theorizing a moment in society when the difference between reality and simulations of reality becomes imperceptible. In *Simulacra and Simulation*, Baudrillard introduces the hyperreal by building on Marshall McLuhan's maxim, "the medium is the message,"[4] stating:

> There is not only an implosion of the message in the medium, there is, in the same movement, the implosion of the medium itself in the real, the implosion of the medium and of the real in a sort of hyperreal nebula, in which even the definition and distinct action of the medium can no longer be determined.[5]

Crucial to a hyperreal cake video is that the cake is not meant to be eaten or even tasted. A cake in the shape of a pair of shoes is traditionally a bad cake. It is unbalanced and some slices may contain disproportionate amounts of fondant icing or decoration. And yet, if we never cut open the shoe cake, it would behave the same as any other unworn pair of shoes sitting around the house. But as symbols, objects, and aesthetic videos, the shoes participate in the construction of themselves and the development of a shared memetic attitude. The attitude is a way of describing a specific behavior inside a specific medium with an outcome or agency through group-aware actions. The shoe cake establishes an attitude by existing as a meta-reality or a meta-medium in which the concept of shoe-as-cake is completed by the video production of cutting such a cake. The distinct action of hyperreal cake is an implosion of both baking and media.

To identify and label various attitudes developed by mixing real and virtual media in the same discipline, architecture can look to film and cinema as a guide. In the field of visual effects (VFX), the term "uncanny valley" describes the awkward period of time when a human eye can detect that a particular visual is simulated or rendered rather than filmed. In the years between 1995 and 2015, just about every film released contained simulated images improving in realism with each passing year. But now that VFX studios can create simulations undetectable to the human eye, we have crossed the uncanny valley. Thus, we can draw an unexpected parallel between hyperreal bakery, meta-virtual architecture, and contemporary digital animation—between a bottle of hand sanitizer made out of genoise sponge cake and the city of Sokovia in *Avengers: Age of Ultron* (2015).[6] So what do we do when the average architecture student's computer with a bit of software can practically outgun an entire VFX studio from just a decade past? What attitudes develop when we have the tools to visualize practically anything we can imagine?

1 D12, "Purple Pills," ***Devil's Night,*** compact disc, Shady Records and Interscope Records, 2001.

2 Vahdat defines metavirtuality as an "awareness about the mediation involved in a virtual experience." Vahid Vahdat, "Meta-Virtuality: Strategies of Disembeddedness in Virtual Interiorities," *Journal of Interior Design* (2022): 3, https://doi.org/10.1111/joid.12230.

3 Instagram video still, accessed on March 13, 2023. https://www.instagram.com/p/CCuE-hgF5xS/

4 Marshall McLuhan and Quentin Fiore, ***The Medium is the Massage: An Inventory of Effects*** (Berkeley: Gingko Press, 2005).

5 Jean Baudrillard, ***Simulacra and Simulation***, trans. Sheila Glaser (Ann Arbor, MI: University of Michigan Press, 1994).

6 ***Avengers: Age of Ultron***, directed by Joss Whedon (Burbank, CA: Marvel Studios, 2015).

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84
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102

In a video essay called *Goodbye Uncanny Valley* (2017),[7] Alan Warburton speculates on the hyperreal future of VFX in animation and film. Warburton describes the frontier, the wilderness, and beyond as the three routes creatives take in hyperreal society (see Figure 2). First, the frontier is described as a cult of perfection. Every detail of a representation is produced in a way that adds "volume, scale, frequency, and density."[8] We can align this thread of action with that of three-dimensional (3D) scanning and the reconstruction of historical architectural sites. Second, there is the beyond. The beyond is where VFX is being pushed to create new mediums like post-cinema and theoretical photorealism. This corresponds with architecture leaking into other disciplines, like game design or fashion.

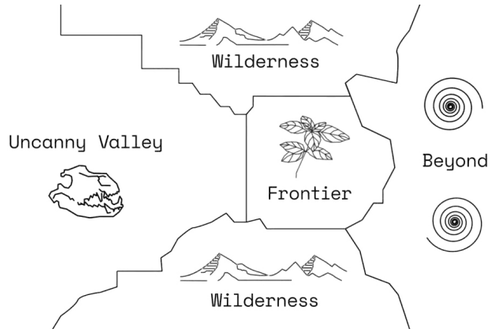

Figure 2. Alan Warburton, 2017.

Finally, and most important for us, Warburton identifies the wilderness as the place where things go to play. It is referred to as "digital grotesque" and contains a grouping of artists and technicians for whom "software excels and where labor must be concentrated."[9] The digital grotesque is focused on visuals that have a technical perfection yet make complex cultural statements. As in hyperreal bakery and meta-virtual architecture, the wilderness contains a self-aware attitude regarding the limits and usefulness of perfection of a tool. These limits are exploited as a way to grab our attention and then shatter our expectations.

Despite all the technological progress, it seems like computer-generated imagery is getting worse.[10] The reason is not technological; it is economic. In economic terms, every simulation takes concrete labor to produce, but its result is a commodity with an exchange value like any other.[11] In a simulation, space and quality need only to perform enough to command efficacy as entertainment. VFX studios are stretched thin and incentivized to use as little labor power as possible to achieve the greatest value in terms of visual (or spatial) production.[12] This scenario is critical to the conversation about architecture and meta-virtual spaces, and architecture's role—or lack thereof—in shaping these environments.

If what Baudrillard suggested is true—there is an implosion of the medium itself in the real—then space has imploded together with media. In *Mediated Space*, James Benedict Brown writes that "to speak of space is always to speak of an abstraction, one that has been constructed within a particular set of power structures."[13] Brown continues:

> As a widely understood referent for cultural and economic capital, the mediated space of screen-based media is being widely used to assert and reinforce the authority and cultural capital of diverse producers. The discipline of architecture has largely been excluded from the production of this mediated space, one which has been more effectively served by other specialist fields, but it remains the best placed discipline from which to name and critique the spatial codes and mechanisms of reproduction that these mediated spaces employ.[14]

The Projects

This discussion of implosion brings us to the following projects, which exist in the wilderness of architecture's attitude toward mixed reality. This attitude is called meta-virtuality: a grouping of architectural proposals aiming to exploit the gaps between the real and the virtual, and, in doing so, producing a variety of social, political, and aesthetic effects (see Figure 3). To explore the various approaches, we can map the physical site of the proposals, combined with their aesthetic decisions within that context, in a chart to distinguish agency and intention.

*Dope Sh*t* by Alayna Davidson is the most virtually stylized and everyday located. It calls for temporary pop-up venues with interactive and traceable digital elements overlaid on them to activate various urban zones. The aesthetic and spatial experiences reference the use of language—the quick evolution of slang—as an ever-evolving input. The goal is to create fleeting digital forms using technology to highlight the transient nature of style within the confines of a mobile device. Here, our discussion of mediated space is not met with any resistance, and the production of physical and digital space is enthusiastically embraced as a necessary step to push the discipline out of reliance on the purely physical.

I am calling *Lightweight Construction* from Galo Canizares and Stephanie Sang Delgado an everyday proposal because it exists as a virtual everyday in the form of 3D data, 2D images, and videos. This digital site creates intentional contradiction in how it visualizes and exposes digital tectonics. There is a complexity and purpose with each image. By rendering with such realism, these images make the hair on the back of my neck stand up in a way that mirrors the uncanny valley. The everyday site seems to be a strong territory for the reification of attitudes surrounding architecture's participation in mediated space.

7 *Goodbye Uncanny Valley*, directed by Alan Warburton, designed by Tom Pounder (London: Wieden+Kennedy, 2017), video essay, 15:00.

8 Ibid.

9 Ibid.

10 Bessie Yuill, "'A race to the bottom': What's the story behind bad CGI?," *The Independent*, April 5, 2022, https://www.independent.co.uk/arts-entertainment/films/features/cgi-movies-bad-sonic-2-b2051621.html.

11 Karl Marx, *Das Kapital: A Critique of Political Economy*, ed. Friedrich Engles, intr. Serge L. Levitsky (Washington, D.C.: Gateway Editions, 1996).

12 Here I am referring to human labor, but a great consideration can also be placed on nonhuman labor: the computer processing power it takes to produce these images and the toll the processing takes on the planet.

13 James B. Brown, *Mediated Space: The Architecture of News, Advertising and Entertainment* (London: RIBA Publishing, 2018).

14 Ibid.

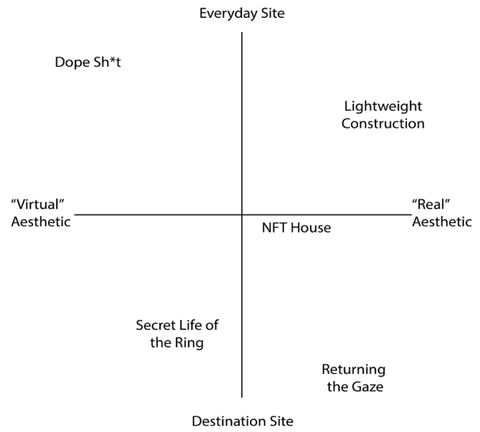

Figure 3. Meta-Virtuality diagram, Ryan Scavnicky, (2023).

An additional project from Canizares and Sang Delgado, *NFT House,* is completely siteless, but it has strong implications for labor relations. Could the ability to track work directly through digital processes be a new unit of measurement in architectural labor? Or is the literal infusion of physical labor as measurement of digital work some kind of performance art? Using digital tools and techniques to work on the aspect of labor relations in software is a crucial part of how architects can imagine a better way to inform the exchange value of our production.

Secret Life of the Ring by Ebrahim Poustinchi and James F. Kerestes presents a living, breathing apparatus that situates itself as a destination. However, those destinations are multiple and vary in scale across an urban context. In a way, *Secret Life* is a game made to turn people into performers without them knowing it. The proposal is a stage for people to tell stories. But that stage is not singular; it is multiple, concurrent, and exists at various scales in real and virtual space. Here, the platform plays host to joy or critique, celebration or tragedy. This production makes more visible the ideals and fairy tales of culture, wrapped together in a web of aesthetics both real and simulated. In this instance, architecture takes up a fundamental challenge to mediated space, which suggests, to me, a shared public infrastructure for the broadcasting of information and performance. The infrastructure exposes at once the center stage and the backstage of our shared digital lives.

Finally, *Returning the Gaze* by Behnaz Farahi proposes the most site-specific installation. It posits the female gaze of a runway model be multiplied and returned back on an audience via unsettling sets of large monitors held by eye-tracking robotic arms. This extends a feminist critique of the male gaze, and it extends architecture into the body. The site choice aids strongly in the narrative: it sets up an expectation of a fashion runway where the gaze of the room is anticipated to fall onto the model's body, and that expectation is upset through this intervention. The gender binary, and all of its power structures, which are both obvious and hidden inside of normative spatial production, is ripe territory for disruption.

Based on these projects and the aims of the designers, we can make a few conclusions. Clearly, the site matters a great deal for the ability to create agency through digital overlays. The digital world has few boundaries or literal territories, but physical space has many. One of the major limitations of digital space shared with physical space is equal access, and often these projects depend on interaction with the public via a smartphone. Yet, according to the latest study by the PEW Research Center, while 96% of U.S. adults living in a household with income of more than $75,000 own a smartphone, only 76% of adults earning less than $30,000 own one. In addition, only 61% of all adults over 65 have a smartphone, meaning that a truly public infrastructure in this case must make accommodations.[15] There are plenty of other issues that can get in the way, like data plans, operating systems, and so on. The projects provide impetus to further research issues architecture faces in the public realm that can double as a shared disciplinary action in the virtual.

Another strong point of further research that these projects highlight is just how architecture should behave in virtual space. The various aesthetic sensibilities shown create a band of results based on the designers' intentions. Those intentions are pointed on either end by a desire to showcase virtuality or to feign solidity. There is an interest in digital tropes becoming physical, such as the famed ellipsis symbol on the lollipop in *Secret Life of the Ring,* which I believe provides a particular point of fluctuation: we see this symbol in the "upper right" of so many apps as a universal symbol for an expandable menu, but in the proposal the symbol becomes physical. This type of aesthetic quotation serves to coagulate and blend worlds together, and each of the projects here shows a varying attitude on how exactly that could be done. These attitudes, and their resulting agency, can provide fruitful territory for architecture.

It seems reasonable to suggest there are more attitudes yet to be discovered. When it comes to meta-virtual architecture, it is precisely the attention to physical space that allows the virtual aspects to provoke such important critiques on mechanisms of power structures. Purple architecture is a meta-virtual architecture. It sits on the spectrum between real and virtual, intentionally so, as a way to aesthetically reframe systems or methods of making, or to entangle labor and gender relations in the production of space. It moves architecture's medium from space to mediated space. Short and sweet: it is a dirty old shoe cut open with a knife to reveal a voluptuous stack of red velvet cake.

15 "Demographics of Mobile Device Ownership and Adoption in the United States," Pew Research Center, April 7, 2021, accessed June 15, 2023, https://www.pewresearch.org/internet/fact-sheet/mobile/#who-owns-cellphones-and-smartphone.

Bibliography

Baudrillard, Jean. *Simulacra and Simulation*. Translated by Sheila Glaser. Ann Arbor, MI: University of Michigan Press, 1994.

Brown, James B. *Mediated Space: The Architecture of News, Advertising and Entertainment*. London: RIBA Publishing, 2018.

D12, "Purple Pills," *Devil's Night,* compact disc, Shady Records and Interscope Records, 2001.

Marx, Karl. *Das Kapital: A Critique of Political Economy*. Edited by Friedrich Engles. Washington, D.C.: Gateway Editions, 1996.

Pew Research Center. "Demographics of Mobile Device Ownership and Adoption in the United States." April 5, 2021. https://www.pewresearch.org/internet/fact-sheet/mobile/#who-owns-cellphones-and-smartphone.

Yuill, Bessie. "'A race to the bottom': What's the story behind bad CGI?" *The Independent*. April 5, 2022. https://www.independent.co.uk/arts-entertainment/films/features/cgi-movies-bad-sonic-2-b2051621.html.

McLuhan, Marshall, and Quentin Fiore. *The Medium is the Massage: An Inventory of Effects*. Berkeley: Gingko Press, 2005.

Vahdat, Vahid. "Meta-Virtuality: Strategies of Disembeddedness in Virtual Interiorities." *Journal of Interior Design,* 2022. https://doi.org/10.1111/joid.12230.

Warburton, Alan, dir. *Goodbye Uncanny Valley*. London: Wieden+Kennedy, 2017.

Whedon, Joss, dir. *Avengers: Age of Ultron*. Burbank, CA: Marvel Studios, 2015.

If you are reading the ***Spatio-Visual Regimes*** book,
you are done.

a PURPLE ARCHITECTURE

Design in the Age of the Physical-Virtual Continuum

Natasha Sardzoska Sandmeier

An Essay

Post-Screen Worlds

You've Been Feeling It Too?

Mysteries and Multiverses

Discussing projects by

Damjan Jovanovic & Lidija Kljakovic
Alayna Davidson
Yara Feghali
Iván Bernal, Keyla Hernandez, & Brendan Ho
Rachael McCall

Designed by Studio EP
using MidJourney and
Runway

October 2nd, 2023, 08:17 pm

Employing the keywords:
[staged], [set design],
simulation, POV, mystery,
worldbuilding, multiverse,
[on white background]

You've Been Feeling It Too?

Mysteries and Multiverses

Natasha SANDMEIER

Mysteries and Multiverses

> Mysteries that are destroyed by measurement were never truly mysterious; only our ignorance made them seem so.
> —Jennifer Egan, *The Candy House*[1]

Mysteries today can be found in the most ordinary of experiences—which is, I suspect, one of several shared themes of the projects included in this section of the book. Each of the projects, in stunning, surprising, and sometimes even simple ways, invokes the extent to which architecture remains today a realm of profound mystery, in a time in which mystery itself can be seen to abound in the world(s) all around us. From flickers and fissures to the mysteries of slang, the ways in which architecture has the capacity to discover and describe new worlds, realms, and contexts reinforces the extent to which architects are forever exploring and discovering new terrain within our world and discipline.

Whether excavating the annals of past worlds and precedents or speculating on the future of worldbuilding, architects, more than anything, spend energy trying to identify the terrain, foundations, thresholds, and limits of where their worlds meet our ("real") world. Inevitably, because we are architects after all, and obsessed with our place in the world, we tend to conflate the where with the who, manufacturing the identity of place as much as the identity of self. It is no coincidence, then, that worldbuilding dominates today's discourse and practice within the discipline of architecture. Worldbuilding is architecture's autofiction. One may assume that I meant to write metafiction, but to world build is most compelling not when it references the self, but when facts of the self (the autobiographical) legitimize its fiction (the speculative).

Purple Architecture's premise posits that there is an actual choice to be made between the red and blue pills that Neo (Keanu Reeves) is offered in *The Matrix* (1999),[2] alongside, in the case of this book, an additional third, purple pill. This brings me to a moment in December when Yara Feghali, one of the authors in this section, leaned over to me during a review and whisper-translated a student's presentation to clarify that AFK is an acronym for "away from keyboard," which in contemporary parlance often replaces IRL, "in real life." This revamped use of AFK is a direct challenge to IRL, which assumes, conventionally, that the physical and material world is the only real one. The larger question at play, though, is why do we need to choose a pill at all? Can we not exist in all three realities at once?

Contemporary life's obsessions with determining what is real and what is not, and thereby sorting, categorizing, and labeling everything, is ultimately what has led us, culturally and societally, to where we are today. We have obliterated mystery. Modernity gave us grids and categories for collecting and shaping knowledge, with the claim to offer a universal truth and thereby a version of reality that many adopted as the one. Over time, we forgot that what we designed and classified as reality is and had always been a constructed narrative of the past that, in turn, prescribes a present. We all know history is itself a story, and one that does not and has never incorporated the multitude of experiences and realities lived in a shared event. History is multiplayer, but its narration is a heavy-handedly first-person point of view (POV), denying multiplayer views and experiences.

For decades (millennia, perhaps) we happily coexisted with our neighbors, agreed on a shared history, without experiencing everyone's intimate stories, pasts, and politics (their POV). Today all of that has changed. We share and consume our likes and beliefs because we are supposedly closer today than ever before, all while growing further and further apart. The reality is that we have become a fractured society of individuals who live in our own little worlds, having to sift through the information of the collective blasting at us from a digital firehose and determine what we consume and what we do not.

Worldbuilding Today

> "You've been feeling it too, haven't you? Something is off. Your clothes never wear as well the next day. Your hair never falls in quite the same way. Even your coffee tastes wrong. Our institutions are crumbling. Nobody trusts their neighbor anymore. And you stay up at night wondering to yourself . . ." And Evenlyn finishes his sentence, "How can we get back?"
> —The Daniels, *Everything Everywhere All At Once*[3]

When the collective social fabric, collective truths, and collective realities are torn away, we are left with no choice but to invent new ones. Worldbuilding, or architecture's autofiction, is quite likely the purplest practice of all. Whether the world is virtual, or IRL (or AFK), is ultimately not nearly as relevant as the mysteries a world reintroduces to the viewer/inhabitant. Story is identity. We build our own worlds through which, inevitably, the ripples of other neighboring worlds often tear, triggering those flickers and fractures discussed in this section. The five projects in this section equally move, blur, and often obliterate the horizon line of what we understand to be the domain of the "real," and beyond that, what "real" architecture is today. They reintroduce mystery into our world experience.

The Cloud Garden and Simulation

Jovanovic and Kljakovic frame their world as a simulation, thereby definitively positioning it outside of the dynamic of the "either/or." Their text asks a question familiar to all architects, in the light of today's radically realistic simulation and modeling systems: What happens to reality when the depth, detail, and comprehensiveness of simulations can be seen to compete with the "reality" all around us?

The authors provide a helpful overview of the contemporary context of this question, by means of a genealogy of modern practices that have focused on the making of new "worlds," notably, in the kinds

1 Jennifer Egan, *The Candy House* (New York: Scribner, 2022).

2 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

3 *Everything Everywhere All at Once*, directed by Daniel Kwan and Daniel Scheinert (Los Angeles, CA: Ley Line Productions, 2022).

of late-modern software game worlds of *The Sims*,[4] *Stellaris*,[5] and so on. Older, simpler versions of (narratively fixed) alternative worlds were eventually "broken open" into nonlinear, multidimensional stories and games (the authors cite David O'Reilly's groundbreaking *Everything*[6] game as a key episode in a shift to the increasingly open-ended, postmodern world where objects and entities of all kinds can be moved around, reconnected and a universe rearranged). They conclude, convincingly, with a view that architectural drawing and representation as we know it has already been profoundly altered, because a world increasingly attuned to simulation building creates a world of alternative histories—upending any idea of fictional versus real "worlds" in which architects might composite their own work. As they say, "The technical logic of a design fiction is the regime of compositing, and not that of a simulation" (see page 130). In their view, the growing array of artificial intelligence (AI) systems that will evolve as a part of this new kind of architectural project will continue to alter—after first totally upending—any sense architects might have of a "natural" digital/physical continuum.

*Dope Sh*t*

Given the timeline of any publishing endeavor, and the blinding speed at which slang moves, with the help of TikTok's rampant propagation, I wonder if an essay on slang should have in the title the date of its writing. The text is dope, although, in early 2023, the terms therein might well require an update to slay, slap, or fire (just sayin'). As Davidson examines the high-speed nature of slang, in contrast with the intrinsic slowness of architecture (with a capital A), and pairs it with aesthetics, she paints a provocative image of a continuously evolving urban environment.

Counterintuitively, while it feels like language today shifts and changes more quickly than ever, especially as new slang words blaze through the internet like linguistic wildfires, the basic structure of language is surprisingly fixed—tied and imprinted as it is into written language. What Davidson offers with *Dope Sh*t* is an opportunity to augment the fixed, built environment (i.e., language) with a layer of skins, modifiers, and subgenres (slang) to appeal to current and future digital designers. The temporality of slang words (in relationship to more stable words, terms, and meanings) suggests the possibility of an architectural aesthetic no less fluid, temporal, or even temporary. Davidson's total embrace of a first-person/third-person role within the text—a relationship that reads at times quite a lot more fleeting than most author-text relationships—provides a glimpse of optimism in the "purple-verse" where physical, digital, and linguistically charged objects coexist with the ease and comfort that they do in her world. Slang is communication, and when it catches on, it is also about audience, both of which architects (who we all know speak and write with dense discipline-centric terminology, at the expense of connecting with the lay person) could be better at.

Inhabiting Indefiniteness

It is the simultaneity of experience that is the attention-getting feature of the kinds of virtual worlds Feghali and her studio produce: worlds where "experiences" are designed responses that have the capacity to happen in multiple, simultaneous ways. What might simultaneity of experience offer as the key to pondering new kinds of virtual worlds?

Multiplicity, in Feghali's view, is not so much the result of a layering of more and more differing identities upon one another as it is the "breaking open" of fissures or cracks between known experiences and identities. In fissures and cracks, new identities can be found, made, or imagined: "Fissures create a condition of in-betweenness, they allow for the multiple to exist simultaneously" (see page 110). That this is seen as not a singular kind of choice between one "reality" and another virtual world is the key here. We are no longer in a world of singular, stable experiences that, in recent decades, have mapped out a world of real and virtual reality. Think instead of the spectacularly destabilizing consequences of what happens when we, like the first-person "Nura" in the story contained within Feghali's chapter, find ourselves continuing to cleave experiences between each subsequent level. After one fissure, we try to distinguish what broke it open from the adjacent reality, doing that over and over in an infinite branching diagram, whereby the number of "in-between" worlds now far outnumber whatever (formerly, singular) "reality" and "virtual" world we started with. How we, or any subject, might possibly "inhabit" such simultaneous experiences, let alone worlds, is the central question guiding the work and studio.

Encapsulations

Bernal, Hernandez, and Ho, the authors of this chapter, draw our attention at the outset to the way in which the well-known Latin American modern literary genre of magical realism can provide one possible template for upending a kind of architectural certainty that is threatened by today's virtual, multidimensional worlds. In their words, "Magical realism blurs the line between fantasy and reality" (see page 58). Does this suggest an entirely new kind of architectural problem or a useful restatement, on radically differing terms, of how we find ourselves situated in the technological conditions of lived experiences today, in all their complexity?

"Situatedness" is the topic or term the authors use to focus our attention on what might be the kinds of realities architects make today. They suggest it is the "flickering" glimpses of other worlds already filling our daily lives that confirm the extent to which we are all (for the most part, productively) inhabiting simultaneous, multiple worlds, where broadcast waves, tweets, posts, and images come and go over the course of a day, enriching, rather than undermining, our everyday experience. Our task is in thinking about how this reality could in turn become a model for the making of deliberately "flickering" installations, spaces, or environments.

Filtered and Fuzzy

McCall's interest is familiar and examined with an intense, bright light: What is the relationship between architecture and image production? This sounds, at first, like the kind of soft and cuddly problem architects of all stripes used to talk about: How does what we make get affected by how we go about making—making the images that guide the making of the architectural object?

What is different in the images McCall constructs as a way of both illustrating and illuminating the chapter is that these images are not "drawn" so much as they have been "grown" via the kinds of immersive, dynamic software systems used to model, render, record, and mutate the parts of the images. McCall's chapter focuses on a stark comparison between new digital realms and those of older, cinematic universes, drawing attention to the still-radical consequences of a universe built out of staggering numbers of pixels versus those of singular, framed views found in film. The most striking discovery of what these two realms share is not the obvious one, that both are worlds inhabited, experienced, and shaped by the always-present cameras recording them, but rather that both are worlds where the only thing that matters is those surfaces seen by the camera. "When designing architecture to be represented using film or animation," she notes, "one does not have to work on all sides of the model" (see page 188). These, unlike any building or built environment in the city around us, are worlds where the very physics and presence of the things and spaces we interact with are shaped by genuinely architectural views.

4 *The Sims*, developed by Maxis, is a life simulation video game.

5 *Stellaris*, developed by Paradox Development Studio, is a strategy video game.

6 *Everything*, developed by artist David O'Reilly, is a simulation video game.

Augmentations, Simulations, and BaudrillardGPT

Until writing this conclusion, and having reread the chapters in this section, I had never considered what Baudrillard may have thought about the rise of worlding and the metaverse, and our ongoing attempt to obliterate the distinction between simulation and reality. ChatGPT offers this as Baudrillard's perspective:

> The Metaverse represents the ultimate stage of the hyperreal, blurring the boundary between the virtual and the real to the point of indistinguishability. While it allows us to live out our wildest fantasies and desires, there is a risk of losing touch with reality and each other, becoming trapped in a world of our own creation. The Metaverse can be seen as a shared dream, a collective hallucination created through our desire for something beyond the mundane reality of our everyday lives.
>
> At the same time, the rise of the Metaverse highlights our desire for something more, a space where we can create our own reality and explore new possibilities. It is both a reflection of our fascination with simulation and a warning about the dangers of losing touch with reality. Ultimately, the Metaverse represents a new stage in the evolution of our relationship with technology, one that challenges us to be mindful of the risks and opportunities that come with these virtual spaces.

This is the plastic tchotchke version of a simulacrum rather than a simulation, so we are none the wiser, and I will spare you ChatGPT's January 2023 version of Baudrillard's take on worldbuilding. Where I would disagree with Baudrillard-cum-ChatGPT is in the case of the alternate worlds designed and described by the authors in this section: they are much less instruments of escapism than they are tools for an alternate architecture, one that is elastic, open, nimble, and above all able to deliver a fundamentally shared experience, that is, the elusive multiplayer POV.

One enduring conceit of modern architecture has been its unfading belief that the production of new forms of architectural knowledge are inextricably linked to the new kinds of technologies across which that production and architecture operate. What happens when those new technologies are deliberately designed and evolved in ways that undermine the stability, the certainty, and the physicality we associate with a "real" architectural world? After all, today's new virtual and augmented realities deliberately leave the world of older, modern technologies like glass, steel, or concrete far behind. What happens is that everything, suddenly, is up for grabs.

With the past decade's explosion of massive new kinds of augmented, virtual, networked languages, online platforms, virtual reality systems, and other attention-getting technologies for the making of new worlds, we have seen a rapid acceleration of new kinds of multidimensional worldbuilding. And yet, we are at the very frontier of a technological shift that is bound to fundamentally change the ways in which we live and move through the world(s). Whether the world toggles between red and blue, or embraces the blending of the two into a rich and iridescent purple, it is a fascinating time to witness the profound challenge to the discipline and profession of architecture. The five distinct kinds of world builders in this section of *Purple Architecture* are five POVs of the infinite strands of possible futures.

Bibliography

Egan, Jennifer. *The Candy House*. New York: Scribner, 2022.
Kwan, Daniel and Daniel Scheinert, dirs. *Everything Everywhere All at Once*. Los Angeles, CA: Ley Line Productions, 2022.
Wachowski, Lana, and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.

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A Purple Architecture
Design in the Age of the Physical-Virtual Continuum

Kelly Bair

An Essay

Post-Screen Chunks

In No Small Part

A Case for the Architectural Chunk

Discussing projects by

Ferda Kolatan
Andrew Saunders
Perry Kulper
Joseph Altshuler
Andrew Kovacs
Beom Jun Kim

Designed by Studio EP
using MidJourney

June 26th, 2023, 10:23 pm

Employing the keywords:
[staged], design,
parts, wholes, chunks,
incomplete, isolated, [on
white background]

In No Small Part

A Case for the Architectural Chunk

Kelly BAIR

The Medium of the Chunks

In 2019, fragments of what looked to be architecturally related materials in miniature, such as columns, arches, and seating arrangements, were unearthed from a closet in the depths of London's Royal Albert Hall.[1] Working with many missing or severely damaged pieces, conservators were able to decipher the chunks as that of a large-scale model of Royal Albert Hall itself. Best efforts at reconstructing the model at the original scale were thwarted due to the poor quality of the found parts, though the partial construct that historians and conservators arrived at, approximately a one-sixth section of the overall venue, confirmed suspicions that what they had was in fact the model assumed lost at some point in the long history of the building. In 2021, the Manchester School of Architecture's B.15 Modelmaking Workshop initiated a project to reproduce the model using the found parts as their primary starting point. While archival references provided insight for the team as far as the model's role in the design phase, the decision to reproduce a model using a fragment of an old model of a still-functioning building is curious. Why would the team not look to readily available digital recording devices such as LiDAR (light detection and ranging) scanning or photogrammetry to record the material information in the physical space around them and subsequently fabricate the reproduction of the model using other widely available digital tools? What knowledge could be mined from a partial relic as opposed to the full-scale, immersive, and complete building in which the model was found? And lastly, with only chunks of a model to refer to, how would the team arrive at an overarching narrative for the project that was not purely speculative?

One theory is that the model chunks offered more insight into the building's history, context (social and political), and initial design intentions than the building itself, or the version of the building that existed prior to its instantiation as physical matter in the world. A chunk of something, especially that of an old architectural model, is likely to consist of the more robust elements of the original, both conceptually and materially. Perhaps the care and ingenuity in the production of these longer-lasting chunks yield some insight into the hierarchical relationships between building elements. Perhaps they also expose the negotiations between the seams, zones of the model that at one point merged with the long-gone portions of the missing parts. The part can be more loaded than the whole, carrying the weight of the project's entirety without fully rendering its visibility. In fact, we often see an inverse relationship between the scale of the chunk and the information it carries. One example is Ferda Kolatan's fragments that are small enough to be labeled "bits." These bits carry information at the urban scale, asserting that, no matter how small or illegible the fragments become, their properties are deeply embedded with architectural logics such as form, material, texture, and color.

1 Simona Valeriani, "Experimenting with Models: The Royal Albert Hall's Case," Architectural Models Network, accessed February 27, 2023, https://archmodelsnetwork.com/experimenting-with-models-the-royal-albert-halls-case/.

Balat Bits

In Kolatan's project, *Balat Bits*, architectural properties are entangled, making distinctions between form and material much less palpable and rendering color and texture nearly indistinguishable. Recognizable urban and architectural forms act as host bodies, mapped with bits of material information, what Kolatan refers to as "residue" (see page 160). Resisting the urge to position the project through dichotomies (old/new, for example) shifts the emphasis on the assembly of chunks from a seam logic to a layered logic. This shift presents a problem for purple architecture as we can no longer traverse the line between the real and the virtual; instead, we experience purpleness through pulsating layers with indiscernible edges. The observer's focus at any given time is what allows one to see more reddish hues or more bluish hues, though always on the purple spectrum. The appearance of the residue on the forms appears as a fever might manifest itself on a human body, intense in some places and invisible in others, suggesting that the states of purpleness vary depending on how deeply one is immersed in the spatial interior or material thickness of the forms. These breakouts of residue on the forms offer alternative narratives for the city at large despite their seemingly detailed minutia.

Baroque Topologies

Similarly, with larger chunks, Andrew Saunders' project, *Baroque Topologies*, analyzes, records, and reconstructs Italian churches using digital surveying tools and methods. The ability to capture and store large amounts of small information fosters a visual transformation between the building and its representation. One set of artifacts from *Baroque Topologies*, called "Composite Series," establishes an archival process through a collection of dizzying perspectives of baroque ceilings stripped of their exterior skins. The result is millions of three-dimensional scan points, so one can only assume that the decision to crop moments from the originals (to include in the representational effects of the project) is not due to technological constraints or computer processing limits. Rather, the choice to scan and represent a part when there is a whole that exists in the built world suggests that a state of purpleness can be achieved with only an interior, making the exterior unnecessary.

The context in which Saunders presents the perspectives offers another technique to further remove the observer from the whole. Saunders' images invert the figure ground logic of Luigi Moretti's plaster models published in *Spazio*[2]. While Moretti's photographs present his cast black models atop a white background, Saunders' ethereally rendered digital models float against a solid black backdrop. Using lighter hues towards the center of the perspective and allowing the edges to absorb color and fade into the black beyond inverts our spatial understanding of Borromini's dome at San Carlo alle Quattro Fontane. This inversion shifts the vertical experience of the original building to one of compression and places the observer into a closer relationship to the real space than the digital space of the model. Like Kolatan's residue on architectural forms, the evidence of purpleness in Saunders' images relies less on specific moments of linear exchange than on the invitation to visually sift through a murky space of digitized bits that appear to occupy different descriptive projections within one worldview. One example of this is achieved by skewing the typical and stable one-point perspective so integral to the Renaissance and used extensively in Saunders' series. This perspectival skew reveals the spatial layers and amplifies their depth through transparency, destabilizing the view and suggesting a space in motion much more akin to Baroque characteristics found in representation and built forms.

2 Bucci Federico and Marco Mulazzani. *Luigi Moretti: Works and Writings.* (NJ: Princeton Architectural Press, 2002).

Birds of Kyoto

A second theory for the use of a fragment as the main impetus for the reconstruction of a building's narrative is that fragments prompt us to look for alternative histories for the worlds we occupy. Fragments impart only a partial read and questionable truthfulness to observers, thus a chunk fosters speculation and misreading as opposed to fact. Chunks imply rather than clearly describe or thoroughly articulate unseen worlds and, in doing so, produce new worlds and narratives about those worlds entirely. In Perry Kulper's work, seemingly disparate fragments, or in this case characters, props, and sets, coexist in surreal scenes that spatialize the worlds that exist between a foreground and background and occasionally, in his words "no grounds" (see page 178) (i.e., the physical and the digital and its two-dimensional and three-dimensional inhabitants). Described by Kulper as surreal, these scenes abide by the rules of the surrealist game by arranging objects that seem unreasonable relative to one another. As if they broke away from their worlds and photobombed Kulper's, these otherworldly fragments help to situate the viewer's depth perception and offer a scale reference for the scene. Often revealing his sleight of hand through photographs of the scene's setup, Kulper asks the viewer to question the truthfulness of physical space as much as digital image. Even when presented with the full picture of a table, backdrop, stage lighting, and cameras, an observer cannot help but think the careful cropping of the photographic clue is perhaps a staged scene within a larger digital world, a place where one could imagine purple architecture is to be found, though in its gradient form, bleeding out into oblivion.

Purple Playthings

In a similar surrealist vein, Joseph Altshuler's work provides portals into equally conflicting worlds that unfold at multiple scales and in many forms, purposely to entice wider audiences. Like Kulper's work, Altshuler's most purple projects go outside the discipline of architecture to source digital and analog modeling tricks and representational techniques. Altshuler's work quite literally puts into play Kulper's notion of the temporality of film as a moving image and its ability to establish an uncanny relationship between characters, props, and the scenes as they float through visual illusion. However, for Altshuler the object and the physical space activated around that object is where purpleness resides: toys, games, puppets, and puzzles provide the roadmap to purpleness. In *Sink Your Teeth into Dessert,* human and nonhuman characters infiltrate each other's scale-specific worlds. The vertically stratified model spans the scale of the human body (as an object in space), the human body part (a hand as an object part of a larger body), and as a human-scale figure (a simulation at a fixed scale and having no connection to humanness until placed in a scalable context). Engagement with the object allows the audience to occupy scaled worlds while simultaneously experiencing the real one.

The Chicago Model

Differing from much of Kulper's and Altshuler's work where the constituent parts are often unaffixed to a surface, are allowed to wander off the stage set for them, or can be moved ad infinitum upon a game board or a computer screen, Andrew Kovacs' chunks require a much tighter connection between one another to convey a cohesive meaning. If Altshuler's game in *Sink Your Teeth into Dessert* is about scale conflation and invites audience members to shrink and expand their visual and tactile senses, then his *The Portmanteau Portmanteau* asks them to inhabit different characters through a combinatorial process of identity-making. In this instance, the chunk only becomes loaded enough to contribute to a larger narrative once it mates with other chunks. Similarly, Kovacs engages with complete wholes such as plastic toys, found objects, and other tchotchkes but assembles them as smaller parts to add up to entirely new wholes. In his model of *Proposal for Collective Living* for the Chicago Architecture Biennial in 2017, Kovacs asserts this meaning through the arrangement of parts that allude to an architectural scale through the combination of parts that attempt to fill a given site, in this case the size of the podium provided by the Biennial curators. The fixed state of the toys as they are cut, glued, and occasionally refinished are reminiscent of a massing model for collective residential living, as one is able to zoom in on the individual characteristics that make each object unique yet zoom out to understand the larger organizational principles at play in their arrangements relative to one another.

Digital Mobius

Using similar combinatorial techniques, though reminiscent of the audience engagement qualities found in Altshuler's work and with images instead of objects, Beom Jun Kim coalescences a stream of images onto continually rolling surfaces that asks those enveloped within them to act as both spectator and performer. In this project, called *Digital Mobius,* the chunk is understood as accumulations of data in the form of pixels generated from social media posts, selfies, and other forms of cultural content expression. Long before we mindlessly scrolled on a digital screen we recorded information on rolls of material, typically paper or canvas. Physical scrolls offered a sense of scale through material thickness and weight, and they offered previews of information (color and texture) to unfold as one viewed them from unintended angles. *Digital Mobius* is the spatial equivalent of the mindless digital scroll where nothing is of any particular importance when viewed in quick succession or as singular images. *Digital Mobius* perhaps establishes a case for purple residing in the space of the infinite surface and image bombardment.

The aforementioned projects all work directly in the medium of the chunk as impetus for purple architecture making. Chunks rarely operate alone though their relationship to other chunks can range from subtle (difficult to register their edges) to distinct (figural). Chunks defy the concept of oscillation between the real and digital put forth in 1994 by Paul Milgram and Fumio Kishino,[3] instead suggesting that multiple worlds, real and digital alike, may be visually occupied simultaneously, a phenomenon that BairBalliet describes as quantum superimposition on architectural terms.[4] This simultaneity does not offer more but instead reduces more into less. It collapses the amorphous space of the digital onto and around the static state of the built environment around us. The chunk, aided by its incompleteness, multi-scalability, and challenge to status-quo representational forms, is purple architecture's most potent building block.

3 Interaction Design Foundation, "Virtuality Continuum," 2021. https://www.interaction-design.org/literature/topics/virtuality-continuum.

4 See BairBalliet, *No More Room*, 2021, SCI-Arc Gallery, Los Angeles, California.

Bibliography

BairBalliet. “No More Room.” Accessed January 20, 2024. https://www.sciarc.edu/events/exhibitions/bairballiet-no-more-room.

Federico, Bucci and Mulazzani, Marco. *Luigi Moretti: Works and Writings.* NJ: Princeton Architectural Press, 2002.

Horsfall Turner, Olivia, Simona Valeriani, Matthew Wells, and Teresa Fankhänel. *An Alphabet of Architectural Models.* London: Merrell, 2021.

Interaction Design Foundation. “Virtuality Continuum.” Accessed February 27, 2023. https://www.interaction-design.org/literature/topics/virtuality-continuum.

Valeriani, Simona. “Experimenting with Models: The Royal Albert Hall’s Case.” Architectural Models Network. Accessed February 27, 2023. https://archmodelsnetwork.com/experimenting-with-models-the-royal-albert-halls-case/.

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Design in the Age of the Physical-Virtual Continuum

A Purple Architecture

Please scan the QR code for the augmented reality (AR) experience.

Simon Kim &
Mariana Ibañez

An Essay

Post-Screen Cyborgs

New Agencies and Compound Beings

A Place for the Nonhuman

Discussing projects by

Daniel Bolojan
Jason Vigneri-Beane
Patrick Danahy & James Billingsley
Behnaz Farahi

Designed by Studio EP
using MidJourney and
DALL.E. 2

June 6th, 2023, 10:23 pm

Employing the keywords:
peerage, nonhuman
agency, hybrids,
compound beings,
synthetic nature, [on white
background]

New Agencies and Compound Beings

A Place for the Nonhuman

Simon KIM, Mariana IBAÑEZ

Peer-to-Peer Transfers

There is a work by Paul Klee called *Angelus Novus* (1920) that was incorporated into Walter Benjamin's idea of an "Angel of History."[1] While much has been written about Benjamin's interpretation of the subject, its eyes agog as an irresistible wind propels the angel backwards/forwards through time, only to survey the detritus and ruin of humankind in its wake, much less has been made of the original work of Klee. The monoprint technique, which is arguably Klee's own invention, involves an oil substrate uniformly greased onto a writing surface that is then transferred to a final canvas. Drawing or pressing down by a stylus on the other side of the transfer sheet marks the canvas more effectively than pencil or charcoal, and a wash of watercolor is later applied.

It is unknown if more versions were made by repeating over the previous drawing, or if these are variations on the angels that Klee pursued decades later. But the artistic impulse to draw this angel did not have any overlap with Benjamin's reading of it. The writer had purchased the print from an exhibition of Klee's work in 1921, and, while they were contemporaries, there is no record of correspondence or intellectual exchange between the two.[2] However, from artistic print to written theory, a peer-to-peer transfer was made in the invention of a written theory inspired by a monoprint painting, and Benjamin's part has become dominant. The painting has become an alibi or a missive for the human species that "draws aesthetic pleasure from its own destruction."[3]

Another example of this peer-to-peer transfer would be the "aleph" in the works of Jorge Luis Borges and Paulo Coelho. As the first letter from the Semitic alphabets, the aleph in Borges's 1945 eponymous short story becomes an unusual point in space.[4] Located in a dusty basement on Calle Garay in Buenos Aires, this aleph is described as a floating sphere of no more than an inch in size, from which all other points in the universe and across time are simultaneously available—replete and stable at every scale. In Coelho's 2011 novel *Aleph*, the aleph is a dynamic agent of change, discovered in a train car, as the protagonist undergoes a process of transformation.[5]

To the present publication, Klee's artwork-transformed-into-an-essay becomes a provocation or point of entry—not because we authors liken ourselves to Benjamin, but for the advent of another, wholly synthetic, hybrid peer that is the Compound Being. Synthetic artificial sentience has been heralded in mythology from China to Greece from fables of early robots, to second-order cyberneticists, to contemporary digital platforms that turn written prompts into images.

Nonhuman Authorship

The argument of the Compound Being builds upon a major note that the current incarnation of artificial intelligence (AI) is not yet a peer in its own right but more of an interpreter. At the time of this writing, generative adversarial networks (GANs) will create images, to be sure; however, those often novel and compelling images are second-order interpretations of original images rather than wholly authored creations. Another minor note is that these images—both the database from which the AI makes its interpretation and the resulting product—are centered on a very human-centric *entorno* or conceit, for our judgment and consumption. The base photos needed for a GAN-generated image of mushrooms, for example, are those taken by humans with a human aesthetic of field and figure, light and dark, exposure and saturation. The new GAN-produced images of supra- or quasi-mushrooms are then judged for their ability to conform to human expectations or to delight them.

For this second note to be removed and for the AI to be considered an artistic peer, not only would the base imagery need to be scanned from its own worldbuilding, but the recomposed images would not necessarily require nor seek human validation. This latter point is of critical interest, as the aesthetic culture of a Compound Being lies beyond our fathom. The universe is replete with phenomena that our physiognomy and intelligence cannot measure—how interesting, then, that the human worldview is always elevated above others.

Gaudi+NeuralNetworks

Gaudi+NeuralNetworks is a work that foregrounds the GAN process of AI-based image production. The result is a revocation of the structure-*qua*-mysticism of Gaudi to one that is more free-form organic. The original image is a photograph of the main nave of the Sagrada Familia, where concrete columns bifurcate as they join a floral canopy of stone. The columns, doubly twisting from their base, are largely swept surfaces, as demonstrated by Mark Burry, executive architect of the Sagrada Familia.[6] The capital or "knot" resolves the vertical sweeps so that the branches continue with new geometries. The stone vaults above the tree-columns have a floral pattern but are generated from hyperboloids covered in gold ceramic, as Gaudi had originally specified in a 1:10 model completed before his death. Like the columns, the vaults are straight lines that are swept, this time in hyperbolics to create sensational surfaces with openings.

What Bolojan's work produces is a recursion of Gaudi's initial design impetus of a pure inspiration from

1 See Walter Benjamin's Über den Begriff der Geschinecte, Thesis IX for greater detail on the "Angel of History."

2 Benjamin's 1931 essay on the work of Viennese writer Karl Kraus, for example, was not met with endorsement by the subject. A charge of Benjamin's broad extrapolation was levied by Kraus as he did not recognize nor enjoy this interpretation of his work. In counterpoint, Eisenman's interpretation of Derrida was demonstrated in the *Choral Works* project in the Parc de la Villette, 1985. The project led to a letter from the philosopher to the architect in 1990, which went to some lengths to explain certain fallacies the architect made when making a peer-to-peer transformation of deconstructivist theory to entangled form. Ultimately, this idea-transform need not be favorable to its originator. In the case of synthetic intelligence, peerage provides an equal standing to render independent judgment.

3 Walter Benjamin, *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*, ed. Michael W. Jennings, Brigid Doherty, and Thomas Y. Levin (Cambridge, MA: Harvard University Press, 2008).

4 Jorge Luis Borges, *El Aleph* (Buenos Aires, AR: Emecé Editores, 1957).

5 Paulo Coelho, *Aleph* (New York: Random House Audio, 2011).

6 Mark Burry, presenting the hidden geometries of Gaudi at the *Digital Tectonics* Conference, Bath, UK, 2002. The authors were present at the event where Burry demonstrated how he recreated Gaudi's esoteric formal structure. Originally developed using straight-edged wooden dies and jigs by Gaudi's stonemasons, Burry's team was able to decipher its complexity with 3D-animation software that would then transfer to advanced construction methods.

nature. What Gaudi also wished to avoid was gothic architecture's indulgence in "veins," the expression of structural forces from the vaulting to the supporting columns.[7] The methodology employed by Bolojan is GAN-styled image production, where the photograph looking up at the nave of the Sagrada Familia is force-paired with a photograph of lush bamboo groves. The AI system is designed with six concurrent networks to organize distinctive features, orientation, and coloration. The system presented here is already quite an impressive force but one that Bolojan recognizes is as-yet non-reflexive: the machine does not understand its own production.

Cephalon C_X.AR

The project dubbed *Cephalon C_X.AR* bends or maps GAN-based images onto polygonal objects scaled small to large and for purposes ranging from social to military applications. Varying patterns seem to be derived from photographs of baked and cracked earth to the repeating mathematics of plants. These patterns become wrapped onto surfaces as different forms of camouflage, as well as color markings and gradations similar to those found on flowers.

Working from Object-Oriented text and techno-ecologic theories, Vigneri-Beane creates a vast project of worldbuilding in which the imagery of this world undergoes a certain *f(x)* transform function to create new flora and fauna. This new world is an uncanny one of almost-recognizable species but given to unknown properties and adaptations. Like any ecology, the primary importance or method of evaluation is an environment that thrives and propagates. There would need to be new coded signifiers to attract or repel transactions among the butterflies and marigolds, or what new symbiotes make up this world's rhinos and plovers, and what traits govern predator or prey.

Faustian Aesthetics

Originally, machine learning meant the development of a free-thinking artificial intelligence, with its own sovereignty and rights. Fears of AI whose logics would counteract human desires led to devastating scenarios of robot uprisings and human suppression. What was seen in Fritz Lang's *Metropolis* (1927)[8] was recently echoed in two "Open Letters on Artificial Intelligence" of 2015,[9] signed by such scientific luminaries as Stephen Hawking and Steve Wozniak. While acknowledging the great importance of artificial intelligence, the scientists were against allowing AI to exhibit free will. In essence, this petition wanted AI to remain under human control and, therefore, serve human interests. Within this system, what machine learning has become is a supervised implementation of human (aesthetic or political) value systems.

Signaling a disinterest in captive or domesticated AI, Billingsley and Danahy seek to produce new aesthetic criteria that are largely machine influenced. Images from digital platforms like Dall.E or MidJourney are retiled and reconstituted over themselves into new terrains. The new landscapes are now differentiated among foreign governance. The evaluation, therefore, shifts from a human criterion to one that is not dependent on what would be easily deemed picturesque or sublime based on western tradition.

Returning the Gaze

Behnaz Farahi is an outlier in this group. Beautifully constructed and meticulously calibrated, her interactive wearables ally themselves more with the project of gender equity. While she does work with machine vision in this project, it is real-time scanning to track faces (targeting the eyes, in this instance) rather than constructing GAN-made images.

Her project, *Returning the Gaze*, presents a camera mounted within a bespoke headpiece. The camera tracks the eye movements of the wearer (a woman) in real-time and projects those eyes onto monitors that are affixed as end-effectors of robotic arms. Like a gorgon, these monitors are an extension of the wearer and look where the woman is looking. In doing so, the project builds on an early poster of the Guerrilla Girls: women who resist the male gaze. But even in this hybrid condition, the state of being-female is foregrounded, as it is the conceptual center upon which the male gaze is thwarted. However enmeshed the woman may be in wearables and techno-prosthetic arms, her gender must remain identifiable.

But Farahi's work points towards an important role in the future of design which would be a multi-agent sensate network. She mentions the construction of the cyborg by Donna Haraway, which blurs human and machine distinctions, and for what we are calling the Compound Being. Rather than focus on a human-machine dualism, the Compound Being is a temporal, custom-formed sentience made of humans, plants, and creatures that are bound by technology. One such Compound Being would synaptically allow for one agent to experience the world through the sense organs of another. For example, what would remain of human-bound phobia and discrimination after experiencing time at the scale of mountains? Or within the span of insects? How would our appreciation of art deepen when we have the hearing capacity of birds, or to see colors beyond the human spectrum? The idea that the arts can be fundamentally changed with new sense organs is compounded with sympathies and trans-species social customs in occupying the world. Recent theatrical productions that employ industrial robot arms as dancers have never considered the aesthetic experience of a robot audience member.[10]

Cyborgs to Compound Beings

Ultimately, human and nonhuman intelligence is not presented here in a false duality. A shared endeavor would be most successful in the occupation of the planet: anthropocenic hierarchies making way for networked affinities where Compound Beings dwell. This sharing has far-reaching but sustainable implications. Architecture and urbanism are therefore not only for human comfort—a model that has drawn out finite resources—but are a new kinship among agents.

In book three of *The Classic of Mountains and Seas* (山海经), there is a description of an animal species found on Mount Hookmy.[11] The creature, named the Goat-Owl or Pao Niao (狍鸮), looks like a ram but has a human face, eyes in its armpits, and human fingernails, and it bares fangs of tigers. The creature preys on people by making sounds like a human baby. This amalgam of parts, as quixotic as it is, would

7 Much of this information is found on the official website of the Sagrada Familia that documents the ongoing construction: Blog Sagrada Familia, https://blog.sagradafamilia.org/en/.

8 *Metropolis*, directed by Fritz Lang (Germany: UFA, 1927).

9 "Research Priorities for a Robust and Beneficial Artificial Intelligence: An Open Letter," October 28, 2015, Future of Life Institute, https://futureoflife.org/open-letter/ai-open-letter/.; "Autonomous Weapons Open Letter: AI and Robotics Researchers," February 9, 2016, Future of Life Institute, https://futureoflife.org/open-letter/open-letter-autonomous-weapons-ai-robotics/.

10 Mariana Ibañez and Simon Kim, "New Bodies, New Architecture," in *The Sentient Archive: Bodies, Performance, and Memories*, ed. Bill Bissell and Linda Caruso Haviland (Middletown, CT: Wesleyan University Press, 2018).

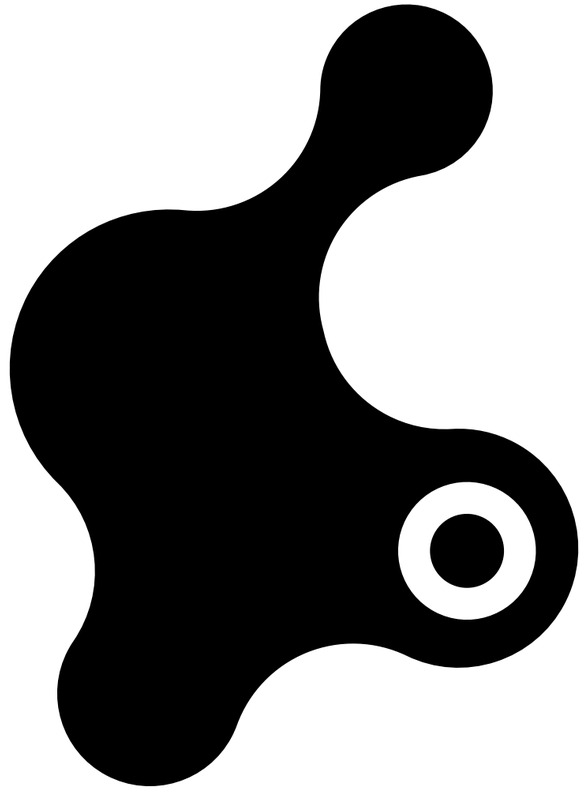
11 Anne Birrell, ed. and trans. *The Classic of Mountains and Seas* (London: Penguin Classics, 2000).

be considered a chimera, and many civilizations have similar mythical creatures. There is the sphinx, the gryphon, the kumiho (구미호), and other supernatural flora and fauna that dwell in origin stories or cautionary tales from every human culture.

Donna Haraway first describes cyborgs in their traditional origin of cybernetic organism, a hybrid of machine and organism—then, increasing the stakes, as an encoded reality of all people in contemporary time.[12] There are three positions or broken borders she crafts that define a cyborg: the first is a break from the traditional human-animal distinction, followed by the second, a removal of the separation between human-animal and machine. The third breakdown is the boundary between physical and non-physical. The techno-devices that envelop our cyborg realities are as immaterial and ubiquitous as air or light. The larger dimensions of being cyborg are no longer a chimerical fusion with machines but being as a new body that brings radical and transgressive politics. The painting that the artist Lynn Randolph produces from Haraway's text is another peer-to-peer transfer similar to the Klee-Benjamin. This painting that graces the front of Haraway's book depicts a seated woman, in the skin of a lion, commanding a powerful digital interface. The artist embraces Haraway's three cyborg breakages but generates a compelling visual, namely the plurality of digits at the keyboard. First, there is the skeleton of the lion's paws visible through its hide, which overlaps with the hands of the woman, rendered in the same intensity and light. Bridging both sets of hands is a graphic of a circuit board with its electrical traces extending out like fingers. These digits parallel and foreground the trilogy of signs at the head of the woman, underneath a crown of a lion, with a canopy of scientific charts beyond.

The Compound Being that extends from the manifesto and is introduced here is the networked occupant of an immersive environment. Building upon Haraway's cyborgs, Compound Beings are many-networked agents designing and sharing a world where one node does not have greater importance than others.[13] What we outlined as peerage at the beginning of the chapter is now a transfer across many forms of sentience and sensory inputs into networked entities. As an active and evolving network, peer-to-peer decision-making may happen by voting systems developed by Condorcet or by dynamic weighting of the Monte Carlo system, or by an altogether emergent system. Architecture's top priority therefore is no longer human-centric values—it is a shared endeavor among many agents.[14] Rather than conditioning space for human comfort, and producing scalar designs for human size, entirely new dimensions of materiality, porosity, and size enter architecture's production. Fossil fuel dependence and costly resource extraction becomes suspect and invalid in favor of regional sustainable practice. Ultimately, the distinction between a building environment and a synthetic nature becomes the final break beyond Haraway's three conditions.

In the *entorno* of the four projects assembled here, we are seeing the activation of other nonhuman sensations and other predilections that counter human endeavor or human sensibilities. Returning to the instigation of Klee's *Angelus Novus* manifesting as Benjamin's "Angel of History," the angel may be recast as a Compound Being of many human and nonhuman eyes. The world of architecture and design changes from static, immobile objects of dominance to softer and dynamic shared states, and the irresistible force that propels it is a micro-electromechanical wind amid a synthetic nature. The sense of awe—or a wild abandon—that the Compound Being feels as it surveys the landscape of synthetic nature is unencumbered from human-centric control and culture. Its impulses and evaluations are of an artistry and aesthetic that is as-yet unimagined from purely human means.



12 Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist Feminism in the Late Twentieth Century," in *Simians Cyborgs, Women: The Reinvention of Nature* (London: Routledge, 1991).

13 Mariana Ibañez, "A House is a Tree is an Insect is a Computer is a Human," in *Paradigms of Performativity in Design and Architecture*, ed. Mitra Kanaani (London: Routledge, 2019).

14 One lesson the authors often share with our research teams is to consider the following idea: "Imagine you're you, with all of your human physiognomy and faculties, but—with embedded technology—you're also a tree. And a frog. What does the passing of time mean for you at the scales of both centuries and days? Now, what implicit biases that we may have among ourselves and with our ecologies would become obsolete?"

Bibliography

Benjamin, Walter. *The Work of Art in the Age of Its Technological Reproducibility, and Other Writings on Media*. Edited by Michael W. Jennings, Brigid Doherty, and Thomas Y. Levin. Cambridge, MA: Harvard University Press, 2008.

Benjamin, Walter. "Theses on the Philosophy of History." In *Illuminations: Essays and Reflections*. Edited by Hannah Arendt. Boston: Mariner Books, 2019.

Birrell, Anne, ed. and trans. *The Classic of Mountains and Seas.* London: Penguin Classics, 2000.

Blog Sagrada Familia. Accessed June 26, 2023. https://blog.sagradafamilia.org/en/.

Borges, Jorge Luis. *El Aleph*. Buenos Aires, AR: Emecé Editores, 1957.

Burry, Mark. "Parametric Design and the Sagrada Familia." Presentation at the *Digital Tectonics* Conference, Bath, UK, March 2002.

Coelho, Paulo. *Aleph.* New York: Random House Audio, 2011.

Derrida, Jacques. "A Letter to Peter Eisenman." *Assemblage* 12 (1998): 6–13.

Guerilla Girls, *The Art of Behaving Badly*. San Francisco, CA: Chronicle Books, 2020.

Future of Life Institute, "Research Priorities for a Robust and Beneficial Artificial Intelligence: An Open Letter" and "Autonomous Weapons Open Letter: AI and Robotics Researchers." Presentation at the International Joint Conference on Artificial Intelligence, Buenos Aires, AR, July 2015.

Haraway, Donna. "A Cyborg Manifesto: Science, Technology, and Socialist Feminism in the Late Twentieth Century." In *Simians Cyborgs, Women: The Reinvention of Nature*. London: Routledge, 1991.

Ibañez, Mariana. "A House is a Tree is an Insect is a Computer is a Human." In *Paradigms of Performativity in Design and Architecture*. Edited by Mitra Kanaani. London: Routledge, 2019.

Ibañez, Mariana and Simon Kim. "New Bodies, New Architecture." In *The Sentient Archive: Bodies, Performance, and Memories*. Edited by Bill Bissell and Linda Caruso Haviland. Middletown, CT: Wesleyan University Press, 2018.

Lang, Fritz, dir. *Metropolis*. Germany: UFA, 1927.

Searle, John. "Minds, Brains, and Programs." *Behavioral and Brain Sciences* 3, no. 3 (1980).

If you are reading the ***Post-Screen*** book, please go to page 120

Design in the Age of the Physical-Virtual Continuum

A PURPLE ARCHITECTURE

Janice Shimizu

An Essay

Post-Screen Systems

Mine the Gap

Considering the Potential of Purple

Designed by Studio EP
using MidJourney, DALL.E.,
and Runway

October 7th, 2023, 03:25 pm

Employing the keywords:
[staged], [set design],
multiple, between,
interstitial, real-time,
authorship, medium,
speculation, [on white
background]

Discussing projects by

Nate Hume
Galo Canizares & Stephanie Sang Delgado
Julia Koerner
Ebrahim Poustinchi & James F. Kerestes

Mine the Gap

Considering the Potential of Purple

Janice SHIMIZU

Defining the Space Between

Purple is presented as a hybrid between the choice of two realities, represented in *The Matrix* (1999)[1] by the red and blue pills offered to Neo (Keanu Reeves). Rather than considering red and blue in opposition, purple implies a threshold between the virtual (simulation) and physical ("real world"). Purple is not so much a third option but rather a gap that provides the ability to move between two established realms. The gap is mutable, relative, and simultaneous; it celebrates the multiplicity of the image, blurring of authorship, and exploration of the agency of mediums. This suite of qualities is critical to innovate processes of generation and speculation for architecture.

The color purple represents a blending of two primary colors, blue and red: each hue is present and yet, through their combination, a series of quantified mixtures between two conditions are created. Josef Albers' *Interaction of Color* asks, "Which is the True Red?"[2] Albers' students embodied this question over decades of studies, making two colors appear like three or three colors to appear like two, to demonstrate the relativity between a color and its context. Using Albers' terms, factually, there is a static color called purple, but actually, there are thousands of experiences called purple, exemplified through his *Homage to the Square*, in which colored squares placed on differently colored backgrounds would appear as a new color or move within our visual field. Purple as a concept eschews the duality of oppositions, and, while there is a trace of the primary, purple lives within the gap. In other words, in isolation there is potential for stasis, but the concept of purple architecture celebrates a fluid and relative condition of multiplicity.

Purple architecture possesses an interdependence of authorship that allows for moments of translation or offsets between types of knowledge. Current investigations using extended intelligence, big data, and automation have challenged the role of the human designers, their expertise, and their ability to collaborate with nonhuman intelligence. Mario Carpo compares the storage procedures defined by human intelligence, which relies on sorting and organizing, to computation, which can quickly access without the need for categorization. Similarly, mass production removed the necessary skill of working with variations embedded in construction material, such as timber, and instead "processed and converted into a homogenous material compliant with industry standards."[3] As constraints have been removed, there is much to gain by rediscovering past methodologies; ironically, the partnership has allowed for a reunion with the artisanal, the heterogeneous, and the specific. Aspirations might be driven by complexity rather than by its elimination, and subsequent investigations have generated profound collaborations based on the differences between the needs of natural systems, patterns of growth, and material opportunities. The gaps that come with translation or performance criteria of people/objects/architecture are fertile grounds for innovation.

These qualities guide an exploration within the gap in the hopes of greater agency with access to innovative systems and design processes. The projects shown here are guided by questions of manufacturing, representation, and climatic response to inform methods of worldbuilding.

Stuffed Crust

Nate Hume's *Stuffed Crust* challenges normative construction with sumptuous, highly articulated drawings that operate at the level of "extra-natural." The focus on material quality, color, and surface live between natural systems and a speculative envelope. Strange combinations of known tectonics and unexpected aesthetics—shagginess or growth patterns—point towards a potential tectonic logic. Like ecological diagrams, patchy façades are a set of conditions and work together under related forces. Responses to wind, water, and heat are considered within highly detailed wall sections that document an exaggerated and accessible poché space. *Stuffed Crust* is filled with hydronic piping and air plenums, while aspiring to simulate organic systems such as the transpiration of leaves. Within and adjacent to the productive void, cohabitation of plants, people, and animals connect protected inside space with outdoor expanses. This connection furthers the ambiguous edge of where the building's growth might occur. Similarly, the film *Minority Report* (2002)[4] and its gesture-based interface "looked at the science fiction side of things, where props collapse and knot together in the activity of prototyping, thereby circulating ideas and encouraging further material production outside the context proper to the fiction. . . . We see the way an entanglement of ideas can slip and slide amongst fact and fiction so effortlessly as to effectively blur the boundaries."[5] The speculative grows potential through storytelling while the normative is pushed from its inertia. Hume's fantastical can be embedded within a disciplinary drawing and has the potential to nudge the direction of progress.

A parallel exists within the Japanese garden, where spaces replicate faraway islands or lakes by creating their miniaturization through material and form. These small mounds and delicate ponds create dioramas of famous sites—they grow in importance while the legacy of the original is softly burnished. The work of Hume Architecture investigates representation through this dialogue between a playful and experimental palette and the world it represents. One appropriates from the other, gaining characteristics while remaining separate. Similarly, there are iconic moments within a Japanese garden that frame a view of a distant mountain, thereby claiming it as borrowed landscape. The space is created for the sole purpose of viewing elements outside the garden walls, to collapse the distance between the edge of the site and beyond. The *Stuffed Crust* detail refers to a much larger discourse regarding interconnected systems, and, within the digital image, infrastructure refers to larger scales of climate and ecosystems. The work hovers between distant worldbuilding and the familiarity of one's backyard.

Lightweight Construction

It is perhaps interesting to contrast a historic French garden that relies on a superficial abstraction of plants into platonic solids with the focus in Japanese gardens on a perceived or even exaggerated

1 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

2 Josef Albers, *Interaction of Color: Revised and Expanded Edition* (New Haven, CT: Yale University Press, 2006).

3 Mario Carpo, *The Second Digital Turn: Design Beyond Intelligence* (Cambridge, MA: The MIT Press, 2017), 68, https://doi.org/10.7551/mitpress/9976.001.0001.

4 *Minority Report*, directed by Steven Spielberg (Los Angeles, CA: 20th Century Studios, 2002).

5 Julian Bleecker, "Design Fiction: A short essay on design, science, fact and fiction," *Near Future Laboratory* (blog), March 2009, https://blog.nearfuturelaboratory.com/2009/03/17/design-fiction-a-short-essay-on-design-science-fact-and-fiction/.

"naturalness" that is dependent on a highly manufactured control. These oppositions play out in Galo Canizares and Stephanie Sang Delgado's *Lightweight Construction,* which creates a strong energy between the literal and the figurative through its tectonic representation of paradox. Canizares and Sang Delgado are engaged in the dialogue between the "inherent contradictions and paradoxes that come from digital materiality" (see page 84). Brick walls stray from their well-known material logic (the depiction of compressive strength) and, instead, construction employs elasticity and drape to explore new directions. Here, the literal relies on one's understanding of the material logics that align with reality. Speculation depends on the intersection of the literal and contradiction. Seams are still important but, like in Nate Hume's work, they have been given new meaning and potentially new performance. The project considers a modular envelope that might expand as needed in response to shifts in air, water, and heat. Tectonics might appear static but hold the ability to unlock a material logic with unexpected tendencies. Here, the misreading advances the potential to communicate new forms of construction.

[fabric]

Julia Koerner's 3D-printed projects *Hybrid Holism Dress* and *the Setae Jacket* challenge the manufacturing and design process, as well as shift between the scale of the body and an architecture of the future. In and of itself, the work demonstrates the beauty of bespoke fashion that is tailored through meticulous means—hundreds of hours of digital modeling, 3D printing, and then the reconstruction of panelized pieces. This process brings an increased range of both performance criteria as well as resolution. The articulation borrowed from butterfly wings might "sense wind, temperature, and location of body parts," (see page 150) which reconsiders the act of wearing as a type of interface beyond protection or modesty.

The *Kelp Mini Clutch* is a highly detailed piece whose geometry, translucency, and interwoven quality is based on scanned kelp artifacts. It considers the wearer as well as the items to be stored within. The porosity of the pattern allows for an additional transparency that plays off the sculptural qualities reminiscent of seaweed drifting with the water's movement. In addition, it exemplifies a type of simultaneity despite its specificity. The digital model considers the scale of a handheld piece, its detailing, and the diameter of the woven elements, as well as the curve of its geometry. However, the flythrough reflects the digital model's spatial potential, and this becomes yet another interface that can be occupied. Scale is relative to the condition afforded by the interaction. Now the clutch holds the promise of an infrastructure of future performance as it jumps scale. As a building proposal, *Kelp Mini Clutch* relays extended surface area and employs a manifold for radiant heating or air movement. Kelp represents a family of biodegradable construction materials and thereby speculates on buildings that might grow or perhaps even communicate like mycelium networks.

The Secret Life of the Ring

Shared authorship, another purple aspect, considers how audience and operator are continually redefined relative to each other. A dichotomy is typically defined by objects such as canvases and monitors. Instead, James Kerestes and Ebrahim Poustinchi's *The Secret Life of the Ring* finds a site flickering between a physical installation and a virtual interface. The work challenges the means of expression and how expression might have agency in the authorship of a project. This occurs at multiple scales and through the instability of expression's transmission.

At first glance, the project is divided into blue and red experiences—there is a physical site and there is an augmented reality (AR) overlay. But in *The Secret Life,* "a frozen slice of a multi-reality mixture that slowly defrosts" (see page 196) challenges ways to access and proposes new interfaces that exist within the gap. For example, the physical site is also modeled in the digital rendering of the project—we experience this backdrop simultaneously and in dialogue. The phone in our actual hand shows up in our virtual grasp. Additionally, others simultaneously occupy these two sites in different ways, and the changes we make inform the experiences of others. As one reorganizes the rings in the clearing, others move the digital rings in real time. Blobby friends and lollypop trackers are engaging on screen but are layered with performative attributes communicating with others nearby or online. Each image can access a depth of specific data as needed or hyperlinked to create a knowledge network that qualifies or tweaks meaning. Contingency for these projects could be identified as scale or audience. The means of interface could further occupy space, alter our reading, and allow shared worldbuilding. In the virtual space as well as the rendered space, multiple scales and atmospheres might exist, which changes our understanding of the place in which we stand. Audiences are given curatorial agency to move digitally, shaping the physical/AR scene, but also to willingly become actors in the performance.

The potential of an AR overlay is shown in the shared construction of the *Steampunk Pavilion* by Gwyllim Jahn & Cameron Newnham + Soomeen Hahm Design + Igor Pantic. Relationship between the operator and medium is played out on the construction site as well as a holographic projection of the fabrication drawings. An existing Cartesian grid of points in space is understood in relation to physical conditions. Hands hold wood components and nudge until calibrated into place. Yet constant revision or revaluation can occur through physical experience in real time. The physical experience goes back into the digital model, which then takes over guiding the construction again. There are clear rules of engagement that are driven by construction goals. Within *The Secret Life of the Ring* there is an assumption that there is a user authorship over the virtual, but one might speculate other unexpected possibilities and opportunities. Might the synthetic author learn or anticipate interaction? Might there be other qualities—less defined, not yet understood, atmospheric in nature—that are due to gaps in knowledge or translation that drive the generative aspects of the project over time?

Rather than false oppositions, these projects embrace the ambiguity and contradictions born out of translations. Acknowledging different types of intelligence allows for the opportunity to learn or to consider and, if lucky, to extend one's ability in a way that is both foreign and unimaginable. There is a power in giving up one's total control of authorship and accommodating the inputs that might come from intentional collaboration, unintentional feedback, and the challenge of invisible protocols. Once one can accept the fluid interface, the larger challenge is to provide criteria to judge the conditions that might have the greatest impact. In the meantime, the in-between time, the touchpoints described above that guide worldbuilding can be mined for further investigation. Doing so leads us to ways we might occupy the ever-shifting gap between what we know and what we might speculate.

Bibliography

Albers, Josef. *Interaction of Color: Revised and Expanded Edition*. New Haven, CT: Yale University Press, 2006.

Bleecker, Julian. "Design Fiction: A short essay on design, science, fact and fiction." *Near Future Laboratory* (blog), March 2009. https://blog.nearfuturelaboratory.com/2009/03/17/design-fiction-a-short-essay-on-design-science-fact-and-fiction/.

Carpo, Mario. *The Second Digital Turn: Design Beyond Intelligence*. Cambridge, MA: The MIT Press, 2017.

Spielberg, Steven, dir. *Minority Report*. Los Angeles, CA: 20th Century Studios, 2002.

Wachowski, Lana, and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.

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you are done.

A Purple Architecture

Design in the Age of the Physical-Virtual Continuum

Frank Melendez

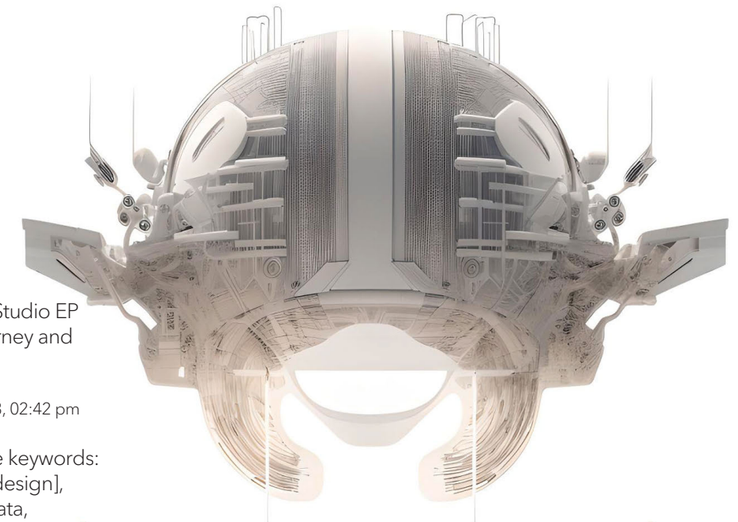
An Existential Scenarios Human-Data Essay

The Dialogue of the Purple

Human-Data Interrelations

Discussing projects by

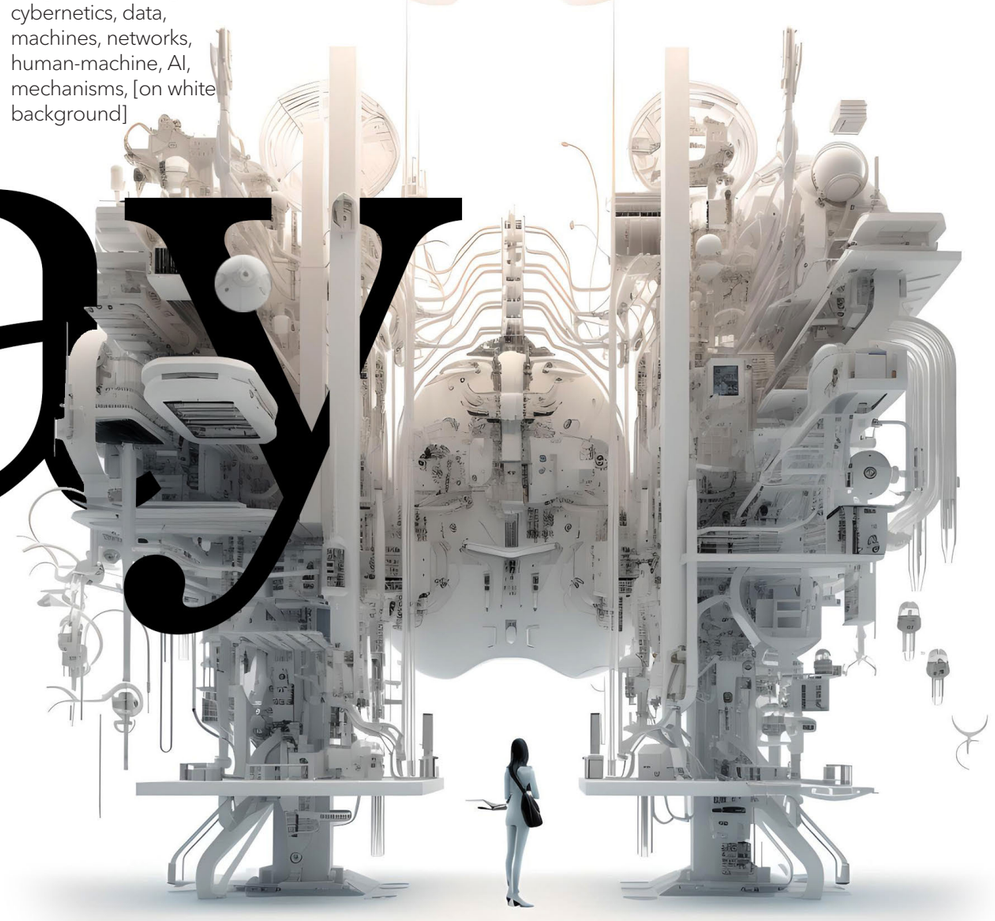
Rachael McCall
Alayna Davidson
Andrew Saunders
James Billingsley & Patrick Danahy
Iván Bernal, Keyla Hernandez, & Brendan Ho
Galo Canizares & Stephanie Sang Delgado



Designed by Studio EP using MidJourney and Runway

October 1st, 2023, 02:42 pm

Employing the keywords: [staged], [set design], cybernetics, data, machines, networks, human-machine, AI, mechanisms, [on white background]



The Dialogue of the Purple

Human-Data Interrelations

Frank MELENDEZ

The Architectural Black Box

In *An Introduction to Cybernetics* (published in 1956), Ross Ashby, the English psychiatrist and pioneer in cybernetics, described the "Problem of the Black Box" stemming from electrical engineering, in which a user is given a sealed box that has terminals for input, which they can control, and terminals for output, which they can observe, in order to deduce its contents.[1] He goes on to explain that in our daily lives we are confronted with systems to which the internal mechanisms are not open to inspection, and therefore, must be treated by the methods of the Black Box. By acting on the box (with inputs), and allowing the box to affect them (in recording their findings), the user and the box are coupled together forming a system of feedback. Cybernetics, initially a postwar science of the adaptive brain, stemming from the field of psychiatry,[2] expanded into broader concepts, including Ashby's Problem of the Black Box, and spread to influence many fields including engineering, computing, robotics, management, politics, art, architecture, and more.

The Black Box concept allows for a deductive method for understanding complex systems, in which the internal mechanisms are not known, by defining inputs and observing outputs. These systems can range from complex social, political, ecological, and technological systems to simpler objects and systems, such as the manipulation of a door handle to produce the movement of a latch.[3] Continuous feedback over time leads to data exchanges that provide users with knowledge of the interworking of a system. Conversely, inexperience with the interworking of machines can have a mysterious, magical type of affect on users. For example, a lack of understanding about the interworking of robots makes machine behavior seem lifelike, prompting people to treat robots more like living things.[4] Today, networks of satellites, data, computing, and robotics have transformed the practice of architecture. The human-machine dialogue has evolved into a fluid conversation with rapid data exchanges and continuous feedback. Contemporary architects and designers have become more polymathic and scientific,[5] working with a range of digital technologies, sensors, scanners, 3D printers, robots, artificial intelligence (AI), gaming devices, and mixed reality systems to produce data visualizations, 3D models, animations, representations, and simulations. This proficiency has led to data exchanges and interactions that collapse the real and virtual, the analog and the digital, into the realm of the purple, allowing for new spatial experiences and future potentials for how we perceive, understand, live, and build in our world.

1 W. Ross Ashby. *An Introduction to Cybernetics*. (New York, NY: John Wiley & Sons Inc., 1956), 86.

2 Andrew Pickering. *The Cybernetic Brain: Sketches of Another Future*. (Chicago, IL: University of Chicago Press, 2010).

3 W. Ross Ashby. *An Introduction to Cybernetics*. (New York, NY: John Wiley & Sons Inc., 1956), 86.

4 Kate Darling. *The New Breed: What our history with animals reveals about our future with robots*. (New York, NY: Henry Holt and Company, 2021).

5 Davina Jackson. *Data Cities: How satellites are transforming architecture and design*. (London, UK: Lund Humphries, 2018).

Over the last several decades the knowledge and methods in which architects and designers have utilized, accumulated, tested, shared (as open-source materials), and interacted with digital technologies has flourished. Similar to the evolution of a dialogue between two people that do not speak the same language, who begin to communicate through hand gestures, advancing their ability to communicate over time, the human-machine dialogue reflects a similar linguistic evolution.[6] Parallel to the exponential growth and accelerated speed of technological advancements,[7] human-machine interactions and human-data interrelations continue to be optimized. Current generations of architects and designers demonstrate a savviness, proficiency, agility, and nimbleness in their interactions with machines, as sophisticated collaborations, that are intrinsic to the reality-virtuality continuum of purple architecture. Metaphorically speaking, if the Black Boxes of various technologies are concealed systems, today's architects and designers are prying the box open to peek inside, glimpsing, observing, tinkering, and hacking to allow for more calculated inputs, while responding to novel, emergent machine outputs, accelerating feedback acuity. In other words, the amplification and evolution of the human-machine coupling has led to the emergence of advanced human-data interrelations—the dialogue of the purple.

Similar to the Black Box with its inputs/outputs separated from its interworking, representation and simulation are typically considered incompatible modes of experience. Representation relies on signs that refer to objects in the real world, and the differences between sign and reality, while simulation replaces reality with its sign, based on effects of the senses.[8] The projects within this section break down these notions, forming spaces, imagery, and experiences that conflate the physical and digital, the real and the virtual, as novel purple architectures through storytelling and worldbuilding. This is due in part, to each designer's profound ability to participate in the dialogue of the purple through their technological prowess, and is reflected in the designs of purple architectures that embody advanced human-machine interactions and human-data exchanges.

Filtered and Fuzzy

In *Filtered and Fuzzy*, Rachael McCall conflates cinematic and architectural effects to create images of wildflowers that simultaneously appear familiar and strange, natural and synthetic. Using the tools and techniques of film and animation software, McCall creates animations of objects and spaces that merge reality and fiction. In this project, what appear at first glance to be natural looking tulips, take on a synthetic quality as puffy flesh-like forms and smooth metallic reflective surfaces. McCall subverts rendering software's capabilities in generating "realistic" looking objects, by mapping other materials onto the 3D model that are uncharacteristic of tulips found in nature. Additionally, McCall dissects specific moments in the animation and alters rendering input parameters and attributes, such as resolution and speed. The project expresses computational processes of animation and rendering software to generate images that highlight the rendering algorithms and sampling methods that are concealed within lines of code. Within each image, the pixel becomes an agent of destabilization, expressing various durations of time, while concurrently heightening both natural and synthetic effects. McCall's ability to manipulate this data, coupled with cinematic editing techniques of cutting, filtering, and overlaying, brings the viewer into a space that flickers between physical and digital, complete and incomplete, fast and slow, real and artificial.

6 Nicholas Negroponte. "Towards a Humanism Through Machines", in *AD Reader: Computational Design Thinking*. Ed. Achim Menges and Sean Alquist, (United Kingdom: John Wiley & Sons, Ltd., 2011), 79.

7 Ray Kurzweil. *The Age of Spiritual Machines: When Computers Exceed Human Intelligence*. (New York, NY: The Penguin Group, 1999).

8 David Ross Scheer. *The Death of Drawing: Architecture in the Age of Simulation*. (New York, NY: Routledge, 2014), 19–47.

188
94
204
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84

*Dope Sh*t*

In *Dope Sh*t*, Alayna Davidson explores notions of temporality in architecture through "slang aesthetics" as visual and spatial representations of words used in popular culture. Davidson points out that slang has the ability to adapt to the present in its aesthetic and meaning, yet the slang term itself does not change and therefore, remains timeless. These same temporal effects of adaptability and timelessness apply to the slang aesthetics of architecture. Davidson further emphasizes these notions in the project by using the architectural typology of pop-up stores which are temporary and constantly changing within established permanent urban spaces. Using artificial intelligence (AI) to generate formal and spatial architectural representations that integrate slang terminology, this imagery is overlaid onto physical urbans spaces that are displayed on cell phones and hand held devices using Augmented Reality (AR). The project conflates contemporary pop-culture, physical urban spaces, AI generated imagery, and AR experiences into purple architecture's reality-virtuality continuum. Davidson challenges the traditional practice, conventions, and slowness of physical architecture and opts to produce a novel, purple architecture that operates at a different, faster speed within a virtual-real continuum. The linguistics of slang are well suited for text-to-image AR generated imagery that reflects rapid changes in pop-culture, while the AR platform provides users with an interface to see physical spaces come alive and participate in the dialogue of the purple.

Baroque Topologies

In *Baroque Topologies*, Andrew Saunders frames the historical strive towards perfecting mapping at a 1:1 scale, all of which are based on methods that use projective vectors. Through concise descriptions of specific historical perspectival and orthographic projection techniques, Saunders frames the systems that are at the root of purpleness within contemporary architectural representations. *Baroque Topologies* amplifies and augments these systems through the use of LiDAR (light detection and ranging) scanning technologies capable of digitizing millions of points. The project highlights the potent capabilities of LiDAR scanning by bringing accurate representations and measurements of Baroque architecture into existence. Demonstrating a proficiency with LiDAR scanning and capitalizing on the attributes of the generated point cloud models, Saunders orchestrates and manipulates data structures to prompt novel expressions and experiences of Baroque churches. Rather than opting to create a simulation of the real space, *Baroque Topologies* yields a purple architectural experience produced by exploiting the outputs of LiDAR scans as point cloud models allowing for simultaneous readings of interior and exterior through transparencies, revealing geometries that are less accessible, unfolding projections to produce new readings, and expressing interior characteristics through coloration. These techniques produce purple effects that merge spaces of the real and the virtual, representations of the analog and digital, and temporal architectural experiences of the past and the present.

Faustian Aesthetics

In *Faustian Aesthetics*, Patrick Danahy and James Billingsley introduce new aesthetic categories for landscape representation that are based on methods of advanced computation and machine learning (ML). These methods evolve the aesthetics of landscape architecture out of the picturesque to yield new disciplinary and ecological ethics while evolving non-human collaboration in design. Danahy and Billingsley's image-making methodology is aimed towards a new landscape vocabulary based on edges separating objects on an ontologically flat landscape and using ML systems to move beyond the Picturesque. The project integrates two ML methods. The first uses subdivision methods from open-source computer vision and AI software that are typically used for image compression and storage, to preserve aesthetic parts of an image, and re-projecting the image based on pixel data. The second uses text-based ML models, preserving the semantics of the image, creating base aesthetics with prompts, and disrupting the image with additional prompts. Danahy and Billingsley's ability to hack into these computational systems provide a method for data exchange that generates a purple landscape architecture aesthetics, allowing for multi-scalar readings, the redistribution and blurring of object edges, and deconstructing and re-projecting Picturesque tropes to a point of absurdity that produces new readings.

Encapsulations

In *Encapsulations*, Ivan Bernal, Keyla Hernandez, and Brendan Ho seek a realism that is based on uncanny moments that accentuate our relationships and environments. Accepting realism as a condition of layered overlapping worlds, Bernal, Hernandez, and Ho seek situational moments in reality, and question how we, and the objects we design, are situated in the world. In identifying specific situational moments, the binary of the digital vs. real becomes futile, and is replaced by multi-layered realities that are revealed through implants/flickers, transplants/misfits, and infusions/seedlings, as a means of exploring and engendering the diverse. These objects and moments are identified through specific experiences such as exuding a strangeness that is slowly reveled upon inspection, displaying alien qualities that stand out in irrelevant contexts, and mutating gradually to absorb and influence their surrounding environments. Similar to a glitch in a computational system, *Encapsulations* draws attention to uncanny moments in architectural projects, urban conditions, and interiors that reveal a world of layered realities to viewers.

A Paradox, Literally

In *A Paradox, Literally*, Galo Canizares and Stephanie Sang Delgado explore the paradoxical duality of the digital model, as a form of representation and as an actuality that exists in its own right. Using the contradiction of the word "literally", Canizares and Sang Delgado establish a framework for design methodologies based on contradictory thinking. The literal becomes a vehicle to explore a multiplicity of narratives and misreadings. Additionally, digital materiality, Metaverse architecture, and digital tectonics are explored in relation to literalness. These frameworks highlight a human-machine dialogue that oscillates between the real and the virtual, producing a doubling condition, where the real and virtual simultaneously exist. This doubling prompts topics of labor and compensation, literal sets of data and information, and the calibration of pixels, voxels, particles, meshes, and physics based simulations in respect to historical architectural techniques, representations, and materials. Through representations that highlight this doubling effect, Canizares and Sang Delgado create purple architectures that simultaneously express contradictory conditions.

If purple architecture is situated within a broad spectrum of purple, the projects in this section display different frequencies within that spectrum. Although each designer approaches purple architectures through various means, interests, topics, and design strategies, a constant attribute across these works includes their proficiency and prowess with computational technologies and machines that reflect sophisticated dialogues. The contemporary digital theories and workflows embedded in these projects exhibit evolved human-machine collaborations and human-data interrelations that I have referred to as the dialogue of the purple. With underpinnings in early cybernetic concepts and experiments, the dialogue of the purple plays a key role in advancing and further conflating the reality-virtuality continuum of purple architecture.

Bibliography

Ashby, W. Ross. *An Introduction to Cybernetics*. New York, NY: John Wiley & Sons Inc., 1956.

Darling, Kate. *The New Breed: What our history with animals reveals about our future with robots*. New York, NY: Henry Holt and Company, 2021.

Jackson, Davina. *Data Cities: How satellites are transforming architecture and design*. London, UK: Lund Humphries, 2018.

Kurzweil, Ray. *The Age of Spiritual Machines: When Computers Exceed Human Intelligence*. New York, NY: The Penguin Group, 1999.

Negroponte, Nicholas. "Towards a Humanism Through Machines", *AD Reader: Computational Design Thinking*. Editors: Menges, Achim and Sean Alquist, 78–85. United Kingdom: John Wiley & Sons, Ltd., 2011.

Pickering, Andrew. *The Cybernetic Brain: Sketches of Another Future*. Chicago, IL: University of Chicago Press, 2010.

Scheer, David Ross. *The Death of Drawing: Architecture in the Age of Simulation*. New York, NY: Routledge, 2014.

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A PURPLE ARCHITECTURE

Design in the Age of the Physical-Virtual Continuum

Martin Summers

An Existential Scenarios Human-Nature Essay

There is a Glitch in the Chimera

Coherence, Boundaries, and Surreptitious Transgressions

Discussing projects by

Julia Koerner
Jason Vigneri-Beane
Nate Hume
Ferda Kolatan
Beom Jun Kim

Designed by Studio EP
using
MidJourney

June 7th, 2023, 08:53 pm

Employing the keywords: [staged], [grotesque], chimera, hybrids, pharmakon, glitch, camouflage, poché, inversions, post-nature, [on white background]

There is a Glitch in the Chimera

Coherence, Boundaries, and Surreptitious Transgressions

Martin SUMMERS

False Binaries

> Here, it is not the content that is the source of anxiety, but the idea of an irrevocably mixed identity, of boundaries or edges that have been obscured or destroyed. What such anxiety would appear to imply more generally is that the preservation of difference has an important mollifying effect on human perception of objects and concepts.[1]

The chimera is a creature from Greek mythology that defies part-to-whole relationships through an inbuilt simultaneity with clear, identifiable features consistent with other, normally separate creatures. The creatures are considered to have positive symbolic meaning when separate, but when blended they become monstrous, evoking fear and ominous foreboding. These two extreme emotional responses seem to be fueled only by the inability to separate, to clearly categorize, and to return each animal back to its natural condition. The underlying logic is that the individual animal is natural/normal and belongs with humans, and the hybridized chimera is unnatural/abnormal and not-human, produced by the gods as if one were viewing beyond the veil.[2] Two different world-pairs have intersected in this moment: that of the afterlife and life, and that of the world as we order it and that which resists our order. These two pairs represent two extremes and for a moment produce a blended third reality that attracts our attention. It is the chimera's destruction of edges that negates our easy categorization and resists our imposition of a perceived order upon the world.[3] The anthropocentric view where natural/normal versus unnatural/abnormal are identified in relation to human expectation is a moralizing position that introduces other binaries like right/wrong, proper/improper, true/false, and accurate/erroneous. Also interesting to note is the human-nature relationship, not as an opposing pair but as a continuity that could be rewritten as right (human and nature) or wrong (not human and not nature)—ideas that I will return to later. If we extend the logic of binaries, we discover that negative qualities are associated with the not-natural, such as abnormal, improper, mistake, and error. These binary conditions become oppositional categories into which we can place things of similar qualities and, as shown before, where we can group things within things, produce new edges, and emulate order. But we would have to first agree that the binary is indeed the only option and agree on what constitutes nature or that which is natural, and if anyone/anything can still make this claim. Ebrahim Poustinchi, friend and one of this book's editors, would describe these binary relationships as false binaries, preferring instead a "both/and" in place of an "either/or." With the authors in this section and the editors of this book, I share the "both/and" predisposition. Rather than accept the false options, we could seek to redefine or redesign the relationship in favor of a more mixed reality, seeking out the purple conditions, appreciating the strange, the abnormal, and the irrevocably mixed. Throughout history we have addressed many of these issues by telling fictional stories, inventing characters (sometimes mythological animals), and producing fabulations, in part to moralize and properly sort difference, and in some cases, to exaggerate the strangeness of the not-real so that we might see what is considered real anew. Narrative stories are something the architects in this section share and to which the book and my contribution partially owe their titles. I will also reference other pop culture, allegorical, and uncanny fictions that help to "reassign boundaries and shift our assumptions concerning the nature of 'being' and our relationship to the external world."[4]

In my own professional work and research, I explore issues of legibility, simultaneity, hybridity, camouflage, and glitches that challenge formal legibility in favor of a more complex and nuanced set of relationships between the designed object, its context, and how one might experience both. In my pedagogical research at the University of Kentucky, these discussions are a focus within each architectural studio where a series of design exercises titled *Disruptive Continuity* (contradictory pair, dialectic) are infused with theoretical texts and discussion of how one perceives objects, edges, enclosure, form, space, gestalt relationships, camouflage, and the environment in which these are perceived. There are discussions of oppositions, binaries, and black and white, but the focus is on solutions with complex interactions, combinatory decision-making, implied conditions, and operational chess moves to amplify the grayscale gradient between two false extremes. In this text I will transpose black and white with red and blue, and grayscale with purplescale, to hybridize the conversation. The exercise prioritizes simultaneity and resists easy answers. In studio, we also discuss how local operations or decisions about the interaction of things are always understood within a context. To understand the purplescale, one must understand and, in most cases, simultaneously reveal the red and blue. To understand a hybrid or an anomaly, one must understand the original and its norms. The goal is not to produce a neutral in-between, but instead to produce new extremes born of this contested and charged space. The extremes in this exercise, as in a dialectic argument, are constructed so that one might reveal or approximate, through a design logic, some form of a negotiated result or synthesis, a new coherency. Unlike logic in pursuit of truth, the dialectic argument "aims to validate or invalidate definitions,"[5] which approximates an answer and produces indeterminate results, not a claim to truth. I would argue that the dialectic also reflects the design process in that most interesting and creative breakthroughs combine some form of rational and irrational thinking, or a conscious and subconscious motivation, and are but one of many possible solutions. These apparently oppositional origins can at times produce an uncanny coherence, a purple architecture, and a purple spatial experience that might be so subtle that we only register its presence once its presence fades. Ideally, our encounter with this space alters our perception of what we consider normal and expands our reality to be more inclusive and diverse.

There is always a relationship between the designed object and its environment or context, even if designed to be an autonomous and independent influence. In the case of *Disruptive Continuity*, the context is now reconfigured by the presence of this strange thing, formed by an unknown and inaccessible logic in contrast to what appears seamless and normal. The attempt to disassociate reveals other possible associations. This mutually linked opposition is best described by the Greek word "pharmakon" or the idea that the invention of a ship introduced its own destruction with the shipwreck. The designed object can oscillate between extremes, where it communicates (legibility) or disguises

1 Ian Monroe, "Where Does One Thing End and the Next Begin," in *COLLAGE: Assembling Contemporary Art*, ed. Craig Blanche (London: Black Dog Publishing, 2008), 35.

2 "Not human" is a part of a direct quotation from *The Iliad* by Homer. Ibid.

3 Ibid.

4 Ibid, 36.

5 Brendan Montague, "On Aristotle's Dialectical Method," *The Ecologist*, October 7, 2019, https://theecologist.org/2019/oct/07/aristotles-dialectical-method.

its origin related to an observer who can "read" or understand some of the formal/spatial relationships communicated. The legibility of a designed object implicates the authorship of the designer and the design process to reveal the intelligence of its making.[6] Legibility typically requires a human observer, or translation through the human intellect, to decipher the language and identify meaning, also a construct of the human mind. What if legibility is not a prerequisite? What if the origin is not entirely human? What if the design logic is post-human? What if perception is via machine vision? The object's translation becomes more opaque and more mysterious. The space between the object and its environment now comes into focus as a new thing that must be considered not empty but instead a gradient of possible conditions thick and rich with information. It is a type of poché that oscillates between surface effects that conceal and inversions that reveal, indicating a porous membrane through which information might permeate.[7]

There is a Glitch in the Matrix

The projects discussed in this section share a search for unexpected and sometimes accidental combinations, misregistration, and category-defying relations that may allude to a chimera in waiting. A new and revealing relationship between worlds, blended, hybridized, and assembled, where simultaneity is valued within a field of difference. We can loosely equate this transformation or state change with the concept of a glitch that emerges within a somewhat systematized process. A glitch is an error that is often fleeting. This temporal understanding acknowledges the transformation that the glitch produces, a transformation that reveals procedural traces of its own becoming; the glitch is an error generated within a system and is registered based on its transformation of the original. In most cases, a glitch is something that is not desirable as it impedes proper function for a brief period. However, its presence reveals an alternate reality, the structure of the opaque and hidden system from which it emerges. This moment reveals a brief glimpse behind the curtain of appearance, a confrontation with what is assumed normal or real, though elusive, and initially beyond comprehension. This revelatory instant can also be intentionally generated, an inversion of the negative association. By actively remixing the structure and code we can reveal a moment of transitional beauty, a purple registration of these simultaneous realities, a beautiful and accurate error. It might also be more subtle in nature, a localized loss of resolution, an unexpected color shift misregistered from the norms, or pixels that drift and appear to become animate, indicating a mediated reality.[8]

Alex Pieschel describes a glitch in *Glitches: A Kind of History* as "something more mysterious and unknowable inflicted by surprise."[9] All his descriptors point to an emotional, experiential, and intellectual relationship with the subject matter that piques our curiosity. This curiosity is generated through the disruption of a known or expected condition or context—it is the very definition of uncanny. As Beom Jun Kim states in his chapter *A Plea for Negativity*, "The question of truth and appearances is the basis of one of the oldest ontological inquiries we know of" (see page 142). This systemic error exposes an alternate order contrasting the origin(al) that appeared seamless initially. We would likely label its prior state as natural, normal, original, or correct. We could further conceptualize this as a whole-to-whole relationship where a coherent whole is discretized through camouflaged seams into a new set of relationships (transformation/translation), producing a before and after (temporality), and an original with a contrasting and partially revealed new. It is also possible for the glitch to eviscerate the apparently clear line between original and new, leaving a simultaneity where the original and the new form an assembled pair. The pair now reveal a third, digital chimera that is more than the sum of its parts. That third space that contained the conjoined pair existed before we experienced the glitch. Once experienced, that which we define as original is always bristling with potential for transformation into its other and possibly returning to a now-altered before.

We can look once again to the pharmakon, a type of conjoined opposition. We can see legibility as evocative of its inverse, that which is just beyond our understanding, that which recedes from our direct knowledge, an uncanny sense that there is more. We begin to understand order and organization through a field of interactions that produce formal, spatial, visual, and/or conceptual coherence without clear rules. This production of coherence also invokes the error, the accidental, the misfit, that reveals a hidden incoherence disciplined by our ability to control. It is in these moments that we can revel in the uncanny and draw attention to the broader coherence through the contrast of its "other"—the anomaly, the unexpected, that which is not anticipated, that which disrupts. It is a similar experience produced by the othering that artificial intelligence (AI) and machine learning algorithms estrange from our reality, where nonhuman logic assembles without hierarchy and without concern for how it may be perceived. The glitch in *The Matrix* (1999)[10] operates in this way, revealing Neo's (Keanu Reeves) mediated reality that introduces a choice between red and blue. This moment is characterized by *déjà vu*, signaled by a slight displacement of the black cat in the scene, as if the two parallel worlds brushed up against each other and the thin membranes of their projected surfaces transgressed their bounds and revealed their entanglement. The choice of the cat as the symbol for the glitch seems to allude to Schrodinger's cat and quantum superposition, made even stranger in recent experiments.[11] By destroying, revealing, and permeating this edge or membrane, the authors in this section make us aware of parallel worlds, our physical world commonly considered "real," and the virtual worlds that overlap, intersect, and reconfigure that reality even when it is operating in the background. These architects use their work to re-register the background into our perceived reality and thus glitch a strange simultaneity into existence. It is an uncanny collapse of multiple worlds into one, as if the surface revealed the labor in the poché.

Human Nature or Human-Nature, But Maybe We Are (Com)Post?

Let us return to the concept of human nature and human-nature. The initial term seems at first to be a "natural" pair. With a slightly deeper consideration, the term reveals a strange and deceptive double (indicated in print by the hyphen for clarity). The binary can be understood in multiple ways and simultaneously oscillating between these conjoined pairs: human nature as a continuity and human-nature (also human versus nature) as a binary relationship of extremes. In our anthropocentric relationship to the world, we have operated in the latter framework, which has wrought multiple existential crises on a global scale. The first is organized by a flat relationship; the latter is hierarchical and reinforces a perceived divide. In this instance human nature produces human-nature so that we

6 Mario Carpo, *The Second Digital Turn: Design Beyond Intelligence* (Cambridge, MA: The MIT Press, 2017), 139.

7 Michael Young, "The Labor Hidden in the Poché" in *Reality Modeled After Images: Architecture and Aesthetics after the Digital Image* (London: Routledge, 2022), 19–46.

8 Mario Carpo, *The Second Digital Turn: Design Beyond Intelligence* (Cambridge, MA: The MIT Press, 2017), 71.

9 Alex Pieschel, "Glitches: A Kind of History," *Arcade Review* 3 (Summer 2014): 30–40.

10 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

11 Zeeya Merali, "This Twist on Schrödinger's Cat Paradox Has Major Implications for Quantum Theory," *Scientific American*, August 17, 2020, https://www.scientificamerican.com/article/this-twist-on-schroedingers-cat-paradox-has-major-implications-for-quantum-theory/.

can maintain order, but which ultimately brings destruction. The works in this section seem to resist hierarchical relationships in a desire to flatten these conditions for mutual and sustaining benefit, even if we all would agree that we are in a post-natural world.

We typically interface with data projected onto two-dimensional (2D) surfaces. Through the surfaces we perceive another reality that is a reflection of our own. Here we can use a spatialized, worldbuilding example of a television series that uses a binary condition to produce a better understanding of "both/and." In *Counterpart* (2017–2019), the characters have an emotionally opposite doppelgänger, their counterpart, that is discovered when an experiment gone wrong opens an intersection between parallel worlds.[12] These worlds are similar but different, as if the prior histories followed the same line with slight deviations or mutations along the way. The counterparts eventually learn of the existence of their other and work together to establish balance and order against those who would destabilize and destroy. In this example the binary uses its ability to deceptively slip across the membrane to defeat the system from within. The characters are separate but forever bound and fighting those who now fill a third space where one is aware of this new conjoined reality. The doppelgängers are only able to operate in the alternate reality by acting as their other, slipping into a familiar but strange personality, an emotional and psychological camouflage, to evade detection. This relationship to the body and conjoined realities is present in the work of Julia Koerner, articulated in her chapter, *[fabric]*. In what can be seen as a series of entangled relationships, Koerner engages nature, fashion, phygital[13] processes, and architecture through multiple allusions. The *Hybrid Holism Dress* crosses from the virtual space of design into the physical space of our bodies and registers its digital twin through its symmetry and perfection, contradicting nature's imperfections and mystifying observers about its origin that hints at its virtuality—a hyper nature. The garment is 3D-printed in high resolution honey-colored resin, evoking memories of insects mummified in amber, furthering our associations with life, biology, evolution, and nature. The dress is intricately detailed to express the meticulous veining and structure of leaves but was not modeled based on direct observation or digital scanning; instead it used Ernst Haeckle's[14] highly stylized observational representations—a mediated translation. This distancing from the natural leaf in combination with the high-resolution 3D printing invokes fantasy and appears to be greater than human capability (i.e., chimera). Its apparent unnatural perfection obfuscates the "more than 300 hours of manual and 3D modeling" (see page 150) that does not include the printing time and post-production labor. In her body of work, Koerner addresses sustainable material and manufacturing processes to preserve nature, invoked by mimicry and spatialized as a microclimate that reveals an uncanny doppelgänger. It is a complex and multi-camouflaging process that uses an othering to make us aware of what we might destroy. A not-natural that helps to preserve what is left of nature.

[redacted]

12 *Counterpart*, created by Justin Marks, aired December 2017-February 2019, on Starz.

13 The blending of physical and digital experiences.

14 Ernst Haeckel, *Art Forms in Nature* (Mineola, NY: Dover Publications, 1974).

Some of these same issues are confronted in Jason Vigneri-Beane's *Cephalon C_X.AR*. The project is a not-natural that helps to preserve (or work within) and stabilize a post-natural world. In a beautifully layered worldbuilding exercise, we are introduced to concepts of cyborg ecologies that synthesize multiple realities into a new equilibrium. Borrowing from Donna Haraway's concepts of "Science-Art Worlding,"[15] we are presented with a near-future reality where information, artificial intelligence, surveillance, and sensing work together seamlessly in a flattened space of remediation, stabilization, and construction of the post-natural world. The apparent binary relationships between "human and animal, animal-human (organism) and machine, and the physical and non-physical" (see page 214) are eroded, revealing more porous constructs than our senses initially lead us to believe. While movies like *Blade Runner* (1982)[16] or television series like *Westworld* (2016–2022)[17] highlight these issues, this world is more holistically stranger than human/not-human. In Vigneri-Beane's construction, the entire planet's ecology is a series of nested hyper-objects working synthetically with virtual and physical realities to produce a new normal, a concept now also strangely real. *Cephalon C_X.AR's* world exemplifies the purple reality-virtuality continuum while also alluding to solutions to existential crises that face our physical existence. It's not attempting to restore what is lost, but instead working from within to construct a new hyper-ecological future. The open systems that operate in this space "thrive on inclusiveness and diversity much more so than autonomy and homogeneity. Ultimately, they are portents that pressure design in the age of environmental change into diverse collectives of agents, hybrids, and holoents" (see page 214). We can learn a lot about our current conflicts through this optimistic, hyper- (techno- and post-natural future) ecology.

In Nate Hume's chapter *Material Undecidability*, we are confronted with a purple materiality that "resists binary classification and forms spatial and physical effects, which themselves form a likewise purple atmospheric, spatial experience" (see page 120). The title anthropomorphizes materials and implies that they make decisions about how they will represent themselves to the world—a type of projected camouflage like the way we choose our clothing.[18] Representation in this case is a loose fit between familiar materials and their surface qualities that alter our perception regarding what is natural/not-natural and real/virtual, advanced by digitally integrated manufacturing processes—a physical/virtual simultaneity that allows for the possibility of their red and blue origin and the purplescale between. The *Stuffed Crust* project attempts to destabilize our initial assumptions through a series of inversions. While initially focused on material defamiliarization, where familiar materials mix with an "unknown digital realm," (see page 120) the architecture continues to invert the familiar in formal and spatial oppositions. The house and garden produce a new conjoined pair, where both enfolds the other into its body, and where the often-hidden poché reveals itself to be another type of exterior—a space of post-natural labor.[19] The house and nature form an assemblage where the edges and seams are strategically concealed and revealed, challenging our all-too-human desire to classify and normalize by symbiotically flattening the relationship between the real and virtual and between human and nature.

15 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, NC: Duke University Press Books, 2016), 10–13.

16 *Blade Runner*, directed by Ridley Scott (Burbank, CA: Warner Bros. Pictures, 1982).

17 *Westworld* (2016–2022), created by Jonathan Nolan and Lisa Joy, aired October 2016–August 2022, on HBO.

18 Neil Leach, *Camouflage* (Cambridge, MA: The MIT Press, 2006), 240.

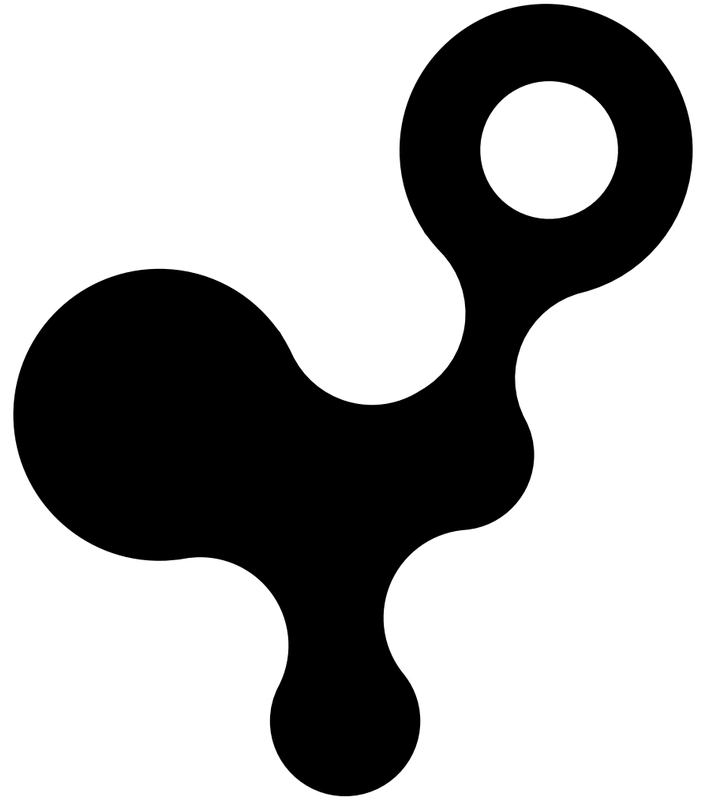
19 Michael Young, *Reality Modeled After Images: Architecture and Aesthetics after the Digital Image* (London: Routledge, 2022), 33–45.

In *Balat Bits*, Ferda Kolatan uses the format of a fable combined with a rich history of architectural fantasy drawings to reconsider the push for novelty often associated with technological solutions and move beyond twentieth-century definitions of progress. In this project, we are introduced to protagonists that resist the prevailing cultural impulses and instead absorb their local context and its rich histories, multicultural influences, and heterogeneous sources. *Balat Bits* initially presents itself as an extension of its reality, but in another strange inversion, the environment so critical to the formation of the bits is only present in the surface of the object. The real and virtual collapsed into the surface of its pixelized representation. The hyperreal qualities of the surface, born of photogrammetry and scans of the physical world, produce an othering of the blank, white space that is now background. The white space might allude to Kolatan's discussion of the "real" as a totalizing attempt by modern, Western architecture (a.k.a., The Whites and their lineage—a double meaning in this context) to classify everything else as "other" and to only consider "real" architecture as what has been selected for inclusion. We are reminded again of the chimera and its ability to defy categorization and the object's relationship to context. In both the text and the architectural representations, Kolatan resists the modern binaries, categorizations, and hierarchies that produced our current ecological crisis in favor of a permeable boundary, or many, that "embodies principles of mixing, meshing, and merging, in which 'difference' is always already an active component within a manifold whole rather than a dividing denominator of oppositional factions" (see page 160). The chimera is now formed of architectural residue that takes on a posture within the white scene.

The fable as a genre provides a framework that anthropomorphizes hybrid characters to teach us about the destruction of finite resources in pursuit of novelty. Rather than continue the cycle of replacing these histories with a global standard of the new (modernism and its continuity), in *Balat Bits* Kolatan offers a reconsideration of place, culture, and consumption through hybridized wholes that accept their residual nature and produce novelty in their assimilation and construction (disruption). Through cunning tactics of camouflage, the characters blend into their surroundings, but, on closer inspection, their purple qualities leak through their familiar conditions in strange adaptations, reconfigurations, defamiliarized materials, and typological mutations. Their chimeric bodies also have biomimetic residue, and their mutating qualities gain an evolutionary strength to adapt within their environment. I am reminded of a quote by another fictional protagonist, Dr. Robert Ford, played by Anthony Hopkins on *Westworld* (also a purple space). In the first episode, Dr. Ford foreshadows the arc of the series by stating, "Evolution forged the entirety of sentient life on this planet using only one tool: the mistake."[20] Mistake, error, glitch—all are transformations within a larger system that makes one aware of difference and of the system that once existed as a seamless background.

As referenced earlier, the dialectic of truth and appearances is not new and permeates this section, the film and television shows referenced, and this text. I would argue that truth is always approximate like the dialectic process and, as Beom Jun Kim notes, it needs its other. In *A Plea for Negativity*, we are taken through a complex set of interwoven pairs that use the "negative dialectics" (see page 142) of Theodor Adorno as a method to critique our current reality and offer a blended reality instead. Through a series of dialectic examples, Kim cites Adorno and Walter Benjamin to demonstrate how industrial capitalism and neoliberal capitalism have commodified cultural production and co-opted architectural experience as a profitable way "to distract and manipulate the masses" (see page 142). Kim recalls that Benjamin foreshadowed a contemporary equivalent in the form of mass media, social media, and information overload but could not have imagined the scale of their impact on daily life.[21] He argues that we have failed to heed these critical theorists' warnings and, through the ubiquity of images, have equated quantity with quality, seeking out "likes" as affirmations. In WA.K Studio's Mexico City pavilion, *The Digital Mobius*, architecture as background, gets transformed from within through this same digital media that is part of our current distractions. In this case, through another type of inversion, the passive audience now is activated to become designers who use their digital devices to transform the architecture by creating a digital "living record of the event" (see page 142). They participate "in an act of design that engages the 'other,' the unknowable, incalculable, and unquantifiable" (see page 142). *The Digital Mobius* calls into question architecture's commodification and need to justify itself through metrics and instead asks us to lean into those parts of architecture that remain just beyond our ability to explain. Like the glitch, the project makes possible simultaneous realities where a purple space is made real and where those experiences are documented.

In this essay I make no claim to truth, simply present my observations born of experience and the readings and misreadings of the other authors and designers in this section, all of whom I admire, and from whose work I draw inspiration to reconsider and evolve my own approach to architecture and ideas.



20 *Westworld*, Season 1, episode 1, "The Original," directed by Jonathan Nolan, aired October 2, 2016, on HBO.

21 Walter Benjamin, "The Work of Art in the Age of Its Technological Reproducibility," in *Walter Benjamin: Selected Writings, 3: 1935–38,* ed. Howard Eiland and Michael W. Jennings (Cambridge, MA: Belknap Press, 1997), 120.

Bibliography

Benjamin, Walter. "The Work of Art in the Age of Its Technological Reproducibility." In *Walter Benjamin: Selected Writings, 3: 1935–38*, edited by Howard Eiland and Michael W. Jennings, 101–33. Cambridge, MA: Belknap Press, 1997.

Carpo, Mario. *The Second Digital Turn: Design Beyond Intelligence*. Cambridge, MA: The MIT Press, 2017.

Haeckel, Ernst. *Art Forms in Nature*. Mineola, NY: Dover Publications, 1974.

Haraway, Donna J. *Staying with the Trouble: Making Kin in the Chthulucene*. Durham, NC: Duke University Press Books, 2016.

Joy, Lisa and Jonathan Nolan, creators. *Westworld*. Burbank, CA: Warner Bros. Television, 2016–2022.

Leach, Neil. *Camouflage*. Cambridge, MA: The MIT Press, 2006.

Marks, Justin, creator. *Counterpart*. Santa Monica, CA: Starz Originals, 2017–2019.

Merali, Zeeya. "This Twist on Schrödinger's Cat Paradox Has Major Implications for Quantum Theory." *Scientific American*, August 17, 2020. https://www.scientificamerican.com/article/this-twist-on-schroedingers-cat-paradox-has-major-implications-for-quantum-theory/.

Monroe, Ian. "Where Does One Thing End and the Next Begin." In *COLLAGE: assembling contemporary art*, edited by Craig Blanche, 35. London: Black Dog Publishing, 2008.

Montague, Brendan. "On Aristotle's Dialectical Method." *The Ecologist*, October 7, 2019. https://theecologist.org/2019/oct/07/aristotles-dialectical-method.

Nolan, Jonathan, dir. *Westworld*. Season 1, episode 1, "The Original." Aired October 2, 2016, on HBO.

Pieschel, Alex. "Glitches: A Kind of History." *Arcade Review* 3 (Summer 2014): 30–40.

Scott, Ridley, dir. *Blade Runner*. Burbank, CA: Warner Bros. Pictures, 1982.

Wachowski, Lana and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.

Young, Michael. *Reality Modeled After Images: Architecture and Aesthetics after the Digital Image*. London: Routledge, 2022.

If you are reading the ***Existential Scenarios*** book, please go to page **110**

Design in the Age of the Physical-Virtual Continuum

A Purple Architecture Lecture

Please scan the QR code for the augmented reality (AR) experience.

Marjan Colletti

An Existential Scenarios Human-Machine Essay.

Postdigital Barbapurple Architecture

50% Barbabelle, 50% Barbarella

Discussing projects by

Yara Feghali
Daniel Bolojan
Ebrahim Poustinchi & James F. Kerestes
Damjan Jovanovic & Lidija Kljakovic

Designed by Studio EP
using MidJourney

June 6th, 2023, 10:53 pm

Employing the keywords:
postdigital, nature,
body, avatar, hybridity,
barbapapa, barbarella, [on
white background]

Postdigital Barbapurple Architecture

50% Barbabelle, 50% Barbarella

Marjan COLLETTI

Purple Hybridity

Worn by Roman magistrates, the rulers of the Byzantine Empire and the Holy Roman Empire, Roman Catholic bishops, Japanese nobility, mourning widows in Thailand, and Prince in *Purple Rain* (1984),[1] the color purple is often associated across both Western and Eastern cultures with aristocracy, royalty, privilege, wealth, spiritual awareness, physical and mental healing, strength, abundance, and the harmony of the universe—but also with magic, mystery, and piety. Unlike violet, purple is not a spectral color with its own wavelength on the visible spectrum of light. It is a composite, hybrid color made by combining red and blue. These two colors represent energy and strength, and spirituality and integrity, respectively, and are exemplified in Chinese culture as Yang and Yin and variously in pop culture. For example, in the shape-shifting French cartoon family *Barbapapa,*[2] Barbabravo (*Barbidur*, in the original French) is a cute, red blob monster who is a very strong and competitive sports fan and lover of heroism. His brother Barbabright (*Barbibul*, in the original French) is a blue architect/engineer, inventor, and lover of science. Purple, therefore, represents the best of both worlds: expanded consciousness, imagination, fantasy, and enlightenment, and, at the same time, wisdom, sensitivity, and humility.

The Purple Pill

As envisioned by the editors of this book, purple may relate to an imaginary third pill in the 1999 film *The Matrix,*[3] one that combines the effects of the red awakening pill and the blue suppressing pill, as offered by Morpheus (Laurence Fishburne) to the protagonist, Neo (Keanu Reeves). The purple pill promises the possibility to enter and exit, with free will, a reality/physicality-virtuality continuum, while not being bound to either of the two realms. What responsible architect of our time would not gladly accept such a purple pill? Alas, many architects who may have taken Morpheus' blue pill prefer to dwell in the ordinary scenario of designing and making buildings as usual and have failed to acknowledge this radical change in architecture's core expertise. At the same time, those who chose the red pill and realized that data and machines lie at the core of everything fully immersed themselves into digitality and virtuality and may find it difficult to nurture the same design intentions for physical and analog things. Consequently, the purple pill appears to be a great alternative, and a more contemporary narrative than the binary twentieth-century blue pill–red pill scenario presented in the movie. The following paragraphs discuss which ingredients of the red and blue pills might still be present in the purple pill.

1 *Purple Rain*, directed by Albert Magnoli (Burbank, CA: Purple Films, 1984).

2 "Barbabright" and "Barbabravo" are characters in ***Barbapapa***, a 1970 children's picture book by Annette Tison and Talus Taylor.

3 *The Matrix*, directed by Lana Wachowski and Lilly Wachowski (Burbank, CA: Warner Bros. Pictures, 1999).

From Red Body to Purple Avatar

> It is disgusting – Why must we have bodies?
> —Jean-Paul Sartre[4]

How might the "awakening" red pill turn purple, that is, empower a two-way system between the analog and the digital for expanded consciousness, imagination, fantasy, and enlightenment? This is a question that architects have asked for decades. The immersion into cyberspace and virtual reality in the 1980s and 1990s caused great exaltation, only to be countered by frustration with such disembodied domains. Today, we are in a new position to reevaluate the rapport between the actual and the virtual, and to do so in terms of the real-simulated body.

In *Simulations,* French sociologist, philosopher, and cultural theorist Jean Baudrillard identified three orders of simulacra. Automata incorporate the first order of simulacra: their obvious fake resemblance to humans is more important than the counterfeits of the referent and falsification of the signified.[5] If Victorian automata emphasized the corporeal side of mechanical apparatuses, the twentieth century proposed a computerized, cyber, and incorporeal body. Baudrillard's second order of simulacra is represented by the robot and its higher degree of performance resemblance to humans and half-independent imitation of reality.[6] It is only within the third order of simulacra, incorporated in the clone, that the dichotomy between reality and simulation is redundant and indistinguishable.[7] In its being organic as opposed to mechanical and of fusing reality and simulation, its organicism, the clone transcends the machine. Yet the twenty-first century appears to extend this process of mutation and evolution and to promote a fourth order of simulacra: the digitally cloned body, or avatar. Several series on Netflix and Amazon have explored this idea already, for example, *Upload* (2020),[8] presenting rather humorous purple two-way threshold situations between real and simulated life.

When confronted with the term "avatar," the first thing that may come to mind for many people is James Cameron's *Avatar* (2009),[9] featuring tall blue aliens. The second thing that may come to mind is the little graphic and often cartoony pictures of us in digital form. The term originates from Sanskrit and literally means descent or incarnation—the material appearance of a Hindu deity on Earth.[10] In its technological

4 Jean-Paul Sartre, ***The Wall (Intimacy) and Other Stories*** (New York: New Directions Publishing, 1969), 60.

5 Jean Baudrillard, "Simulations," trans. Paul Foss, Paul Patton, and Philip Beitchman (New York: Semiotext[e], 1983), quoted in Joanna Topor, "Simulation, simulacrum," The University of Chicago, Theories of Media, Keywords Glossary, 2002, https://csmt.uchicago.edu/glossary2004/simulationsimulacrum2.htm.

6 The term "robot" comes from the Czech ***robota,*** which means compulsory labor. Peter Menzel and Faith D'Aluisio, ***Robo Sapiens: Evolution of a New Species*** (Cambridge, MA: The MIT Press, 2001), 16. The term was not in use until 1920 and was then coined by Karel Čapek in the play ***R.U.R (Rossum's Universal Robots)***. Marie O'Mahony, ***Cyborg: the Man-machine*** (London: Thames & Hudson, 2002), 43.

7 Jean Baudrillard, "Simulations," trans. Paul Foss, Paul Patton, and Philip Beitchman (New York: Semiotext[e], 1983), quoted in Joanna Topor, "Simulation, simulacrum," The University of Chicago, Theories of Media, Keywords Glossary, 2002, https://csmt.uchicago.edu/glossary2004/simulationsimulacrum2.htm.

8 *Upload*, created by Greg Daniels, airing 2020-present, on Prime Video.

9 *Avatar*, directed by James Cameron (Los Angeles, CA: 20th Century Fox, 2009).

10 Wikipedia, s.v. "Avatar," accessed March 15, 2022, https://en.wikipedia.org/wiki/Avatar.

manifestation, avatar is used to define a person's "'embodiment' in an electronic medium."[11] Most video games and social platforms give users the opportunity to create customizable avatars of themselves, that is, Bitmojis in Snapchat, Memojis by Apple, and so on. Many apps are dedicated to the creation of avatars, from *Avatoon* to *Dollicon*, *Zepeto*, *Dollify*, *Star Idol*, *Avatar Maker*, *Boo*, *FaceQ*, and *Zmoji*, among others.[12] Moreover, Epic Games' *MetaHuman Creator*[13] and its fully rigged photorealistic digital humans push the limits of hyper-realism to new frontiers. On another note, avatars raise the important issue of equality, diversity, and inclusion; their almost endless design possibilities challenge the assumed certainties of age, background, beliefs, culture, disabilities, ethnicity, gender, race, religion, and sexual orientations. These are topics that the 2021 exhibition *How The Internet Changed My Life* at the Kunsthalle Düsseldorf, curated by Gregor Jansen, Alicia Holthausen, and Juliane Hoffmanns, endeavored to tackle. The exhibition "examined perceptions and understandings of the body in the context of gender identities and self-identification."[14]

Digital technology makes all this various embodiment possible. As Elizabeth Grosz explains, it is technology that enables communication between the body and the world of things.[15] Kevin Warwick's 1998 forearm implants are a well-known example of early cybernetic symbiosis.[16] "Cybernetics," coined by Norbert Wienerhalf a century earlier, paved the way for conceptualizing human-computer symbiosis through postulating three concepts central to animals, machines, and computers: data transfer (communication), behavior theories (control), and optimization (feedback)[17]. Already in 1960, Joseph Carl Robnett Licklider championed new ways that men and computers could work "together in intimate association."[18] His main ambition was to overcome mechanical human-machine systems in which the machine was a mere prosthetic device to the human decision-maker. The alternative was that of computers that would "facilitate formulative thinking" and "cooperate in making decisions and controlling complex situations."[19] AI (artificial intelligence), ML (machine learning), GANs (generative adversarial networks), and diffusion models are the most recent iteration of this man-machine rapport.

The four projects in this section, *Inhabiting Indefiniteness*, *Creative AI in Architecture*, *The Secret Life of the Ring*, and *The Cloud Garden* clearly attempt to tackle the red-turning-purple agenda of digitality in the twenty-first century. The authors discuss Web 3.0 interfaces, immersive collaborative tools, multiple pluralistic worlds, techno-cultural cyber-feminist realities, interpolative and extrapolative creative AI-supported design processes, multimodal shared agencies, multi-reality mixed performance spaces, trans-scalar interactivities, performer-audience hybridity, self-playing open-ended simulations, gamified architecture, architectural gamification, and more.

Indeed, within the yet-to-be-settled paradigms of a new and contemporary debate—which I call "postdigital" and which is meant to denote an evolution of the digital, rather than a rejection of it[20]—virtuality and actuality are again merging and interpenetrating each other. Think of the "Metaverse," Web 3.0, and the world of decentralization. Virtual interactive environments have now evolved to the point of becoming state of the art for a very broad range of industries. They are extremely efficient and fast in rendering 2D/3D/4D graphics, static/dynamic assets, sounds/textures, and AI/physics (i.e., collision detection, environments, behaviors) with real-time interactivity for parallel users. Designers are habitually early embracers of digital technologies and are often extremely skilled and keen to use digital technologies to articulate their ideas in 2D drawings (CAD, Photoshop, Illustrator, etc.), 3D models (CAD, 3D printing), and increasingly 4D clips (simulations, animations, visualizations). 5D capabilities give designers new opportunities to develop, change, adapt, test, and evaluate object/building/urban designs in real-time with high-resolution results. Moreover, most communication in the twenty-first century happens with increasing resolution and speed on highly sophisticated and interactive devices, from mobile phones to PCs to TV screens (HD>4k>8k)—a technological jungle as complex as nature itself.

From Blue Nature to Purple Ecology

> Smoke on the water, a fire in the sky
> —Deep Purple, *Smoke on the Water* [21]

How might the "suppressing" blue pill turn purple, that is, empower a two-way system between the analog and the digital for wisdom, sensitivity, and humility? This question has preoccupied architects not for decades but for millennia, particularly if we understand analog as natural and digital as artificial. Finding architectural inspiration from nature has a rich heritage and tradition. There is, however, an area of tension among nostalgia, romanticism, progress, and evolution, and even catastrophe, crisis, and disaster. In *Network Nature: The Place of Nature in the Digital Age,* Richard Coyne captures the complexity by discussing some of the most-used metaphors of nature in architecture.

The "romantic" approach sees nature as the "metaphor of balance, harmony, and beauty to which we must be attuned." This romantic approach finds an expression in "organic architecture"—as argued by Frank Lloyd Wright, not a "mere style" but a way to describe buildings as organisms with all-inclusive designs, where every element relates to every other.[15] Basically, his is a philosophical stance that

11 Varun Kumar, "18 Best Avatar Maker Apps of 2023," Rank Red, January 2, 2023, https://www.rankred.com/best-avatar-maker-apps/.

12 *Merriam-Webster*, "Avatar," accessed March 15, 2022. https://www.merriam-webster.com/dictionary/avatar.

13 "METAHUMAN, High-fidelity digital humans made easy," Unreal Engine, accessed March 15, 2022. https://www.unrealengine.com/en-US/digital-humans.

14 Kate Cooper, Luki von der Gracht, Christina Quarles, Nicole Ruggiero, Tschabalala Self, Cajsa von Zeipel, "Journey Through a Body," ***e-flux Announcements,*** May 29, 2021, https://www.e-flux.com/announcements/394668/kate-cooper-luki-von-der-gracht-christina-quarles-nicole-ruggiero-tschabalala-self-cajsa-von-zeipeljourney-through-a-body/.

15 Kevin Warwick, "Cyborg 1.0," ***Wired Magazine,*** February 1, 2000, https://www.wired.com/2000/02/warwick/. He had a glass capsule, containing a computer chip capable of alerting him of incoming emails, implanted into his arm. A year later a second implanted chip allowed him to communicate and exchange data with a computer. His later research looks at ways of storing data of human emotions.

16 Elizabeth Grosz, *Architecture from the Outside: Essays on Virtual and Real Space* (Cambridge, MA: The MIT Press, 2001), 171.

17 Norbert Wiener, *Cybernetics, or Control and Communication in the Animal and the Machine*, 2nd ed. (Cambridge, MA: The MIT Press, 1961).

18 Joseph Carl Robnett Licklider, "Man-Computer Symbiosis," in *Cyber_Reader: Critical Writings for the Digital Era*, ed. Neil Spiller (London: Phaidon Press Limited, 2002), 55.

19 Joseph Carl Robnett Licklider, "Man-Computer Symbiosis," *IRE Transactions on Human Factors in Electronics*, vol. HFE-1, no. 1 (March 1960): 4–11.

20 Marjan Colletti, series ed., with Peter Massin, Andreas Körner, Theresa Uitz, and Clara Jaschke, ***Postdigital Neobaroque Vol.1–3*** (Rome, IT: deditore, 2022–23).

21 Deep Purple, "Smoke on the Water," ***Machine Head***, vinyl record, Purple Records, 1971.

advocates the "harmony of the human establishment with the natural organic ambience."[22] A more recent use of the nature metaphor, according to Coyne, diverges into two different descriptions. Firstly, the "analogical" metaphor, which depends "on algorithms, big data," is "at home with the idea of digital networks, mobile computing, social media and sensory feedback from the environment" and is based on biology-architecture parallels in terms of shape, form, and process, or biomimicry.[23] Secondly, the "evolutionary" metaphor, which makes itself "evident in the improvements of classes of artifacts over time" is related to a "salutogenic discourse. . . that encourages antagonism between the natural and the artificial."[24] The evolutionary approach relates to emergence and simulation, and in recent history to terms that have led most of the digital architectural theories and designs, such as evolutionary and morphogenetic.[25] *Organic* as a term no longer cuts it, as it "has lost its precision and tends to be applied loosely to anything with a few curves," as maintained by Hugh Aldersey-Williams in *Zoomorphic: New Animal Architecture*.[26] Much more importantly, as I have summarized elsewhere, there is such overwhelming evidence to regard the notion of "nature" as obsolete and to shift to "ecology" as a much better concept to discuss, particularly within a postdigital paradigm.[27]

Let us return now to the four projects of this section, *Inhabiting Indefiniteness*, *Creative AI in Architecture*, *The Secret Life of the Ring*, and *The Cloud Garden*. Yara Feghali's virtual world is set in a desert landscape with soft, diffused lighting and dunes, which may symbolize the lack of nature (except the few random palm trees) in the project (also, there is no mention of nature, besides the reference to Haraway's *The Reinvention of Nature*. [see page 110]) Daniel Bolojan argues that "a node-based Creative AI model composed of several discrete neural networks with varying modalities and tasks" is "capable of identifying compositional and structural features in samples of Antoni Gaudi's *Sagrada Familia* and samples from nature" (see page 76)and hence flirts with a contemporary notion of interlinking architecture, nature, and machines. Ebrahim Poustinchi and James F. Kerestes' pink-magenta (maybe purple) lollipop performance space is embedded in a leafy green garden. The two domains are clearly delineated and distinct in materiality, shape, and artificiality; consequently and apparently, they are not engaging in a dialogue—perhaps the project needs to be experienced to understand the "environmental . . . interaction" (see page 196) suggested. Damjan Jovanovic and Lidija Kljakovic discuss simulations and whether they can raise "novel questions on the nature of models and modeling" (see page 130). Two rocks, situated on a Superstudioesque mini 20×20 super-grid, are the only reminders of a garden (a term borrowed from the title). Evidently, the authors were not interested in simulations capable of producing models of nature of higher sophistication and richer narratives. It is surely not my intention to criticize these projects, but I merely highlight that artificial intelligence/virtual reality/extended reality (AI/VR/XR) projects to date tend towards the blue, rather than the purple. It is surely only a matter of time until this changes, similar to how digital projects tended to be very red for a very long period.

This tendency was one of the main drivers for a series of projects I was recently involved in: exploring ambiguous overlaps and interfaces between the natural, the virtual, the augmented, the online, and the built environments. Through a series of reconfigurable architectural components, the projects *Pahoehoe Beauty*, *Triopic Spectacle*, and *Postdigital Natures of Planet B* explore a variety of interfaces between the aforementioned domains (see Figures 1–3).[28] Paired with virtual overlays, various 3D-printed structures highlight the contemporary potentials of novel, renewable, recyclable, and regrowable materials in conjunction with robotic fabrication. In the projects, organic shapes and metabolic ambiance interact with each other. The integration of nonhuman agents, both flora and fauna, further questions the role of space-making in the Anthropocene. Together, the proliferation of all these components establishes a positive, colorful postdigital vision and reconsiders the color of digital design by rethinking avatars and nature. The latter is certainly at risk of being lost, and pure digitality, as I have asserted multiple times, will clean neither the waters from the smoke nor the skies from the fires.

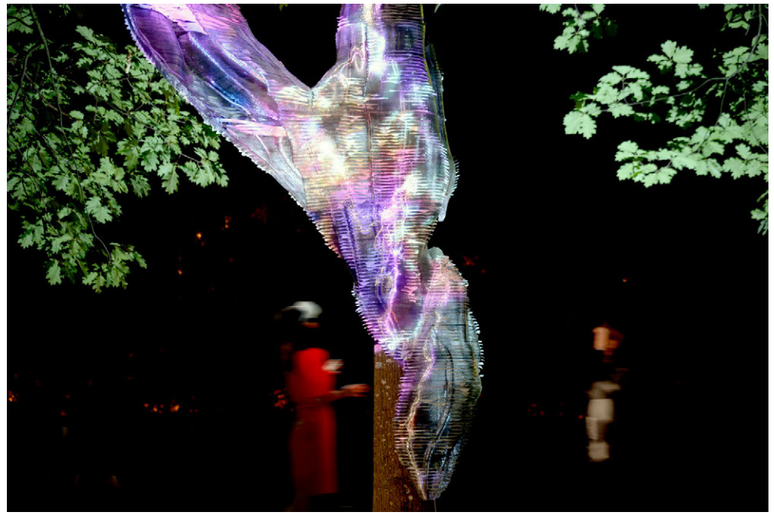


Figure 1. The real reality: the local, physical domain. The installation features haptic, robotically 3D-printed and machine learning-developed appendices that perfectly fit a chosen, 3D-scanned tree in the Johannes Kepler University Gardens in Linz, Austria. "Passers-by" can interact corporally and physically with the installation as well as with a collaborative robotic arm that maps the environment and its users in real-time. Team PDNB (2021).

22 Frank Lloyd Wright, "Organic Architecture," in *Frank Lloyd Wright on Architecture*, ed. Frederick Gutheim, reprint (New York: Grosset & Dunlap, 1941), 181.

23 Biomimicry was first defined in the 1950s by American biophysicist and polymath Otto Schmitt as the study, distillation, and development of the structure, form, or formation of biological systems and materials as models for design. Michael Pawlyn, *Biomimicry in Architecture* (London: RIBA Publishing, 2011), 2. Sometimes the word "bionics" is also used, whereby it defines something designed with a functional solution in mind. "Biomorphic," Tate, accessed January 12, 2023. https://www.tate.org.uk/art/art-terms/b/biomorphic.

24 Richard Coyne, *Network Nature: The Place of Nature in the Digital Age* (London: Bloomsbury, 2018), 24.

25 A first (analogue) morphogenetic approach seems to find expression in organic architecture, with origins in the scientific and philosophical work of Goethe. A second (digital) strand divulges more mathematical and algorithmic (the term is derived from Persian mathematician al-Hwarizmi, †850) working concepts.

26 Hugh Aldersey-Williams, *Zoomorphic: New Animal Architecture* (London: Laurence King Publishing, 2003), 11.

27 Marjan Colletti and Peter Griebel, eds. *Meeting Nature Halfway: Architecture Interfaced between Technology and Environment* (Innsbruck, AT: iup, 2018).

28 All images are from *Triopic Spectacle*, Ars Electronica 2021, team PDNB (Marjan Colletti, Peter Massin, Theresa Uitz, Andreas Körner, Clara Jaschke, with Oliver Hamedinger, Catalina Tripolt, Mümün Keser, and REX|LAB, Georg Grasser, Kilian Bauer, Julian Edelmann).

Figure 2. The mixed reality: the local virtual reality space. A virtual multi-user space was developed in which AI reinterprets the acanthus leaf ornament (a quintessential metaphor and model of nature in architecture) and extends it into a borderless space of immersive visual, haptic, and acoustic experiences for multiple "local avatars." Team PDNB (2021).

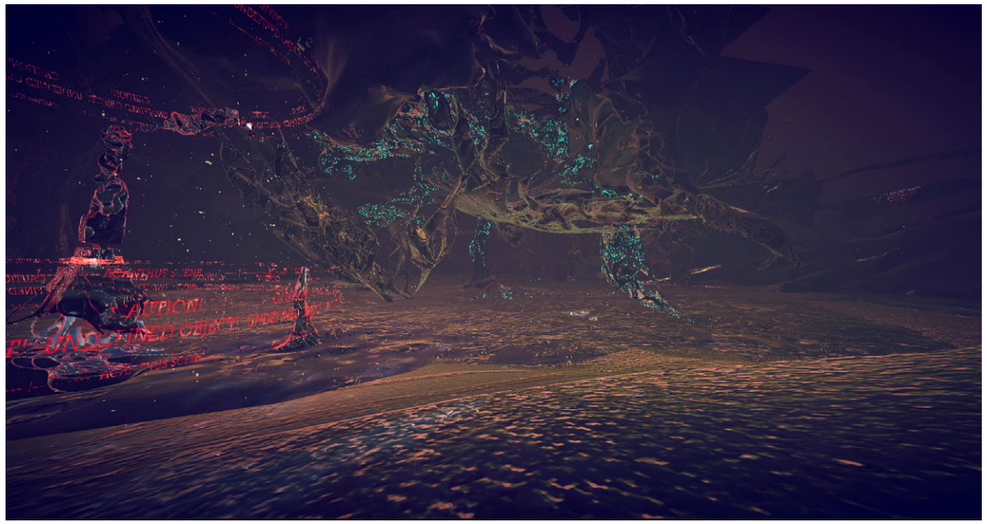


Figure 3. The virtual reality: the global, digital virtual reality space. An interactive and online-based social space that allows "online avatars" to view and engage in a dialogue with the real and mixed spaces of the exhibition thanks to an embedded ecosystem of cameras and projectors on-site and online. Team PDNB (2021).

Less Barbabelle, More Barbarella

Purpleness encourages a deeper awareness of nature, its acceptance and neglect, and a postdigital shift towards new morphologies of trans-domain ecologies that span from the analog to the virtual. We have seen how, together, a potential evolution or mutation of the body may point to the avatar as a material-virtual agent capable of entering and exiting at will.

However, there is no guarantee that purple architects (especially if they are not open to trans-disciplinarity) will be able to avoid or delay the construction industry's catastrophic damage to the planet. Indeed, one cannot go wrong in attempting to combine Barbabravo's heroism and Barbaright's science. On the contrary, such an attitude is surely infinitely better than quitting architectural innovation and falling into the black hole of conspiracy theories. Along the way in this transition to postdigital purpleness, we must not forget beauty, which, as I have argued elsewhere, seriously matters.[29] Intriguingly, sister Barbabelle, the purple blob monster, loves beauty. The caveat: she is also a bit of a drama queen, who enjoys jewelry, dresses, and perfume. Consequently, we may say that she enjoys prettiness, rather than beauty. Indeed, purpleness is in danger of being overly allured by the prettiness of virtual aesthetics, just as architecture is in being overly tempted by a romanticized vision of nature and virtuality.

Perhaps, I may suggest, that purple architects be wary of becoming 100% Barbabelle and dare to be also a bit like the protagonist space traveler of the 1968 French-Italian sci-fi film *Barbarella*[30] (the Blu-ray release features a purple background) played by Jane Fonda. In the movie, "Barbarella's mission involves confronting her own repressed human nature, an evil queen who objectifies her innocence, and a final showdown where she is tortured for daring to enjoy her newfound sexuality," writes Andrea Subissati.[31] The mission of purple architects similarly involves confronting their own repressed human nature (posthumanism, maybe?) and their very own evil queen (nature, surely, very much in tune with Slavoj Žižek's motto: "Mother Nature is not good, it's a crazy bitch")[32] who objectifies their innocence, and a final showdown where they are tortured for daring to enjoy their newfound sexuality (their real bodies as trans-domain avatars, who knows). I therefore suggest adopting 50% of Barbarella's typical 1960/70s irreverence, absurdity, and wackiness, as it might come much closer to a purple narrative than any video game or virtual reality world or design project created so far, and the other 50% from the *Barbapapa* family: strength, science, and beauty. We might then perhaps achieve the overall aim of 100% barbapurpleness, a double-hybrid postdigital condition of purpleness.

29 Marjan Colletti, "Ambiguous, Bipolar Beauty. And Similarly Agile and Fragile Post-Digital Practices," in *Beauty Matters: Human Judgement and the Pursuit of New Beauties in Post-Digital Architecture* 89, no. 5, ed. Yael Reisner (London: Wiley, 2019), 90–97.

30 *Barbarella*, directed by Roger Vadim (France: Marianne Productions, 1968).

31 Andrea Subissati, "Barbarella," The Columbia Museum of Art, accessed January 14, 2023, https://www.columbiamuseum.org/barbarella.

32 Liz Else, "Slavoj Žižek: Wake up and smell the apocalypse," *New Scientist*, August 25, 2010, https://www.newscientist.com/article/mg20727751-100-slavoj-zizek-wake-up-and-smell-the-apocalypse/.

Bibliography

Aldersey-Williams, Hugh. *Zoomorphic: New Animal Architecture*. London: Laurence King Publishing, 2003.
"Barbabravo." Barbapapa. Accessed January 06, 2023. https://www.barbapapa.com/barbabravo-en/.
"Barbabright." Barbapapa. Accessed January 06, 2023. https://www.barbapapa.com/barbabright-en/.
Baudrillard, Jean. "Simulations." Translated by Paul Foss, Paul Patton, and Philip Beitchman. New York: Semiotics[e], 1983. Quoted in Joanna Topor, "Simulation, simulacrum," The University of Chicago, Theories of Media, Keywords Glossary, 2002, https://csmt.uchicago.edu/glossary2004/simulationsimulacrum2.htm.
Cameron, James, dir. *Avatar*. Los Angeles, CA: 20th Century Fox, 2009.
Čapek, Karel. *R.U.R (Rossum's Universal Robots)*, translated by Claudia Novack-Jones and with an introduction by Ivan Klima. London: Penguin Classics, 2004.
Colletti, Marjan. "Ambiguous, Bipolar Beauty. And Similarly Agile and Fragile Post-Digital Practices." In *Beauty Matters: Human Judgement and the Pursuit of New Beauties in Post-Digital Architecture* 89, no. 5, edited by Yael Reisner, 90–97. London: Wiley, 2019.
Colletti, Marjan and Peter Griebel, eds. *Meeting Nature Halfway. Architecture Interfaced between Technology and Environment*. Innsbruck, AT: iup, 2018.
Colletti, Marjan, series ed., with Peter Massin, Andreas Körner, Theresa Uitz, and Clara Jaschke. *Postdigital Neobaroque Vol.1-3*. Rome, IT: deditore, 2022–23.
Cooper, Kate, Quarles, Christina, Ruggiero, Nicole, Self, Tschabalala, von der Gracht, Luki, and von Zeipel, Cajsa. "Journey Through the Body." *e-flux Announcements*. May 29, 2021. https://www.e-flux. com/announcements/394668/kate-cooper-luki-von-der-gracht-christina-quarles-nicole-ruggiero-tschabalala-self-cajsa-von-zeipeljourney-through-a-body/.
Coyne, Richard. *Network Nature: The Place of Nature in the Digital Age*. London: Bloomsbury, 2018.
Daniels, Greg, creator. *Upload*. Seattle: Amazon Prime Video, 2020-present.
Deep Purple. "Smoke on the Water." *Machine Head*. Purple Records, 1971, vinyl record.
Else, Liz. "Slavoj Žižek: Wake up and smell the apocalypse." *New Scientist*, August 25, 2010. https://www.newscientist.com/article/mg20727751-100-slavoj-zizek-wake-up-and-smell-the-apocalypse/.
Grosz, Elizabeth. *Architecture from the Outside: Essays on Virtual and Real Space*. Cambridge, MA: The MIT Press, 2001.
Kumar, Varun. "18 Best Avatar Maker Apps of 2023." Rank Red, January 2, 2023. https://www.rankred.com/best-avatar-maker-apps/.
Licklider, Joseph Carl Robnett. "Man-Computer Symbiosis." In *Cyber_Reader: Critical Writings for the Digital Era*, edited by Neil Spiller. London: Phaidon Press Limited, 2002.
Licklider, Joseph Carl Robnett. "Man-Computer Symbiosis." *IRE Transactions on Human Factors in Electronics*, vol. HFE-1, no. 1 (March 1960): 4–11.
Magnoli, Albert, dir. *Purple Rain*. Burbank, CA: Purple Films, 1984.
Menzel, Peter and Faith D'Aluisio. *Robo Sapiens: Evolution of a New Species*. Cambridge, MA: The MIT Press, 2000.
"METAHUMAN, High-fidelity digital humans made easy." Unreal Engine. Accessed March 15, 2022. https://www.unrealengine.com/en-US/digital-humans.
O'Mahony, Marie. *Cyborg: the Man-machine*. London: Thames & Hudson, 2002.
Pawlyn, Michael. *Biomimicry in Architecture*. London: RIBA Publishing, 2011.
Sartre, Jean-Paul. *The Wall (Intimacy) and Other Stories*. New York: New Directions Publishing, 1969.
Subissati, Andrea. "Barbarella." The Columbia Museum of Art. Accessed January 14, 2023. https://www.columbiamuseum.org/barbarella.
Taylor, Tatus and Annette Tison. *Barbapapa*. New York: Henry Z. Walck Publisher, 1970.
Vadim, Roger, dir. *Barbarella*. France: Marianne Productions, 1968.
Wachowski, Lana and Lilly Wachowski, dirs. *The Matrix*. Burbank, CA: Warner Bros. Pictures, 1999.
Warwick, Kevin. "Cyborg 1.0." *Wired Magazine*, February 1, 2000. https://www.wired.com/2000/02/warwick/.
Wiener, Norbert. *Cybernetics, or Control and Communication in the Animal and the Machine*, 2nd ed. Cambridge MA: The MIT Press, 1961.
Wright, Frank Lloyd. "Organic Architecture." In *Frank Lloyd Wright on Architecture*, edited by Frederick Gutheim. New York: Universal, 1935. Reprinted, New York: Grosset & Dunlap, 1941.

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Ayad Rahmani

An Existential Scenarios Human-Human Essay

Power Jokes

A Critical Response to Evolutionary Thinking

Discussing projects by

Andrew Kovacs
Joseph Altshuler
Perry Kulper
Behnaz Farahi

Designed by Studio EP using MidJourney, and Runway

September 18th, 2023, 03:54 pm

Employing the keywords: [staged], [set design], architecture, media, worlds, data, technology, human, evolutionary thinking, [on white background]

Power Jokes

A Critical Response to Evolutionary Thinking

Ayad RAHMANI

Picking Up Where Postmodernists Left Off

The four projects that are presented in this section of *Purple Architecture* are different but they do share a keen interest in questioning age-old architectural practices, indeed pulling them apart and seeing what falls between the cracks. For too long and at least since the eighteenth century, the rational project had biased reason over intuition, tracing a specific path between problem and cure. Observations alone were not enough; they had to also be channeled through a hierarchy of analytical stations, each authenticating the one before and making possible definitive conclusions. The process was linear and demanded focus and soon specialization—naturally, at the expense of a broader view of the world. And why not, as our increasingly urbanized world demanded empirical scrutiny, every day proving more complex and indeed unsafe than the one before. To the problem of sanitation there had to be a technical understanding of hydrology, and to that of fires, a keen ability to test and evaluate materials. Engineering flourished and with it a regulatory system that stipulated heights, widths, and pretty much everything else that went into the making of the built environment. Even time was standardized, syncing activities and events across space. What happened in New York had to march along the same beat as San Francisco, not least to harmonize cultural and economic differences.

All was well, cities now much safer and healthier than ever before, even if at the expense of social and economic equity. And yet still "reason" went too far, squeezing out alternative and creative access to function and meaning. Even worse, it became the domain of the specialist, and as such a source of distinction between those who knew and those who did not or were less equipped to know how to manufacture knowledge. Soon, walls rose to protect the former from the influences of the latter. It was only a matter of time before these walls became less about protection and more about isolation and power—reason now wielded as a cudgel to beat down society and determine what it can and cannot do. As one scholar put it, "The scientific status of certain branches of knowledge [became] without doubt a way of turning these branches of knowledge into a hierarchy. . . linked to power status and social consensus."[1] The result, among other things, was the rise of institutions, including in architecture, featuring curricula, licensing procedures, and other formal gateways with which to assign architecture formal credence and protect it against cultural degradation. What had been a skill accessible to the public now became a matter of privileged education and a system of matriculation that took effort and years to climb. The architectural office went from one to two architects, and then ten and soon fifty and a hundred, at least one-third of whom were devoted to legal and marketing issues. The story is long, but it would amount to a rigid method of processing and distributing work, including dealing with clients, contractors, and a plethora of consultants, inevitably leading to a production of architecture that was linear and predictable.[2] Nor was aesthetics spared—it too falling victim to a stiff tabulation of lines and geometries. It was hard by mid-twentieth century to look at buildings and see in them art. An accountant whose main concern was technical efficiency and numerical accuracy might as well have been behind the drafting table.[3] The pace never let up but continued well into the twenty-first century—the office remaining a matter of formal, if now more democratic, relations.

The Architectural Model

There is nothing the four submissions under study here would like to do more than reverse course, namely explore ways by which architecture can "imagine and enact more desirable worlds," (see page 48) as one of the contributors puts it. At least three of the submissions have their roots in the postmodern movement of the sixties and seventies, restoring color and play to an otherwise emaciated architectural project. And not unlike the postmodernists, they too wish to accomplish their task through jokes, making serious light of staid, age-old barriers.

Take for instance the architectural model. A tool traditionally used by students of architecture and architects alike to simulate a future reality, it has always been the source of fascination. Crafted well, it becomes the center of attraction. And yet it does not come without a dark side. Or so Andrew Kovacs, one of the four contributors to this segment of the volume, would like us to think, arguing that beneath the allure of the simulation there lies a few unsavory truths, not least the arrogance that reality can be known well ahead of the time it takes to actually know it. Not only are critical creative steps skipped in the process, but so are important individuals, critical to the success of the project for which the model was created in the first place. These may be members of the client team, or those that represent the immediate neighborhood, or still others who speak on behalf of a marginalized community. Either way, the traditional model eliminates them or merely gives lip service to their presence, replaced by a certain obsession with certainty. Indeed, the architectural model may seem innocent enough at first sight but look again and you may just see a different side, which is Kovacs' aim. He would like nothing more than to flip the traditional architectural model on its back and reveal its hideous underbelly.

Kovacs asks a few colleagues to help him, charging each with the task of finding objects and placing them in the new model. If the traditional model had been premised on preplanned milled objects, his was going to be assembled based on objects found on the street and in vintage stores. And once collected they were going to find their way into the model less based on some classical notions of beauty and harmony and more on empathy. If the previous modelmaker's fidelity was to the finished design, in all likelihood conceived by a separate hierarchy of office lead designers, Kovacs' helpers were going to be loyal to each other, each keenly sensitive to what the previous team member had done. No moment in the model construction, in that sense, is hijacked by corporate interest, leveraged against commands that lie elsewhere in time and space.

Make no mistake about it: Kovacs' model is a critique of capitalism and an economic system that for years had biased ends over means and consumption over production. It did not matter how something was made; so long it was out there and generating revenue, all dissenting voices to the contrary can be damned. Nor did it matter that it produced waste, much of that waste finding its way into streams, oceans, and other critical natural systems. Again, so long it pleased the investor, all eyes could look in the other direction. When Kovacs makes his model a repository of the urban wasteland, his intention is not to make an aesthetic statement but a moral one, namely that no matter what we build, the results must have their consciousness distributed across the city. Those discarded pieces out on the street came from somewhere and will end up somewhere else, which, if not recognized as such, can spell the demise of social and environmental networks.

1 Jeremy W. Crampton and Elden Stuart, eds., *Space, Knowledge and Power: Foucault and Geography* (London: Ashgate, 2007), 26.

2 See Robert Gutman, *Architectural Practice: A Critical View* (Princeton, NJ; Princeton Architectural Press, 1988).

3 See Reinhold Martin, *The Organizational Complex: Architecture, Media, and Corporate Space* (Cambridge, MA: The MIT Press, 2003).

Labor matters to Kovacs too, namely the happiness of those who every day toil for the boss and the company. For too long and still today, employees have been forced into robotic contracts with those for whom they work, performing tasks already scripted for them ahead of time. Do this and do that, leaving little or no opportunity for ownership and joy. By allowing his colleagues to add to the model based on whim or at most a decision made by a previous colleague, and not, again, say, by a boss, Kovacs restores to the laborer an element of instinct, or more specifically the ability to have an instinctual relation with the world. Nothing short of happiness is at stake, or so Freud may tell us in this light, he who himself blames a good part of human misery on the degree to which we have become resigned to accepting our inability to act upon instinctual feelings. Instincts are remnants of our past, dating back to the origins of the human species, when we roamed and savaged just to survive. Ideally, they should have melted away with time and progress, but they did not, and instead stayed with us and increasingly became more at odds with civilized society. And so, we have had to tamp them down, or as Freud says in his *Civilization and its Discontent*, "transform instinctual aims into such directions that they cannot be frustrated by the outer world."[4] Kovacs' team members are far happier, by this logic, than their counterparts at the office.

Conflicting Realities

Purple Playthings, a chapter by Joseph Altshuler, picks up where Kovacs left off, also keen on taking the architectural model to task and also by way of joking. In it, Altshuler laments the way the current architectural model "points toward a specific constructed outcome" (see page 48). In reaction he offers an alternative: "purple playthings that provide portals into immersive other worlds that often exhibit conflicting realities," (see page 48) which, among other explanations, is the definition of jokes, at least according to one nineteenth-century psychologist. A joke, the psychologist said, "is the arbitrary connecting or linking, usually by means of a verbal association, of two ideas which in some way contrast with each other."[5] The intention is to subvert the meaning of each idea or established world. By bringing two dissimilar ideas to bear on each other, both fall apart in favor of a third or fourth reality. Altshuler uses the work of his Chicago-based firm, Could be Design, and its expertise in alternative interior design, to illustrate this point. In one project, the joke is played against the humorless world of plumbing fixtures—sinks, faucets, pipes, and the like. The piece is called *Sink Your Teeth Into Dessert*, a play on words in which the sink is at once a noun referring to the fixture into which water is normally poured and hands and dishes cleaned, and a verb, referring to the act of biting into an item of food. United arbitrarily by a word, the two dissimilar worlds, which when collapsed one on top of the other, yield not so much another world as the realization that neither should be so sacred as to prevent new experiences. Why should cleaning and eating be so separate? Might the two be much closer and even one and the same? In a time when micro-living has become more popular and indeed needed, given the financially exclusive housing market in which we live, these previously independent realities can and perhaps should merge, inviting, no doubt, new and invigorating human interactions. For too long, our domestic narrative had been scripted by a market that profited, and continues to do so, from separation, indeed fragmentation. It might be time to take fragmentation more seriously. It might be time to take control and rewrite the story of living by those who live and not those who sell living. Nothing short of the future of communication is at stake, but also notions of friendship, shared ownership, neighborly associations, and so on. This is of course no laughing matter but one on whose resolution the future of the human condition and indeed the planet depends.

4 Sigmund Freud, *Civilization and its Discontent* (New York: W.W. Norton, 1961), 25.

5 This quote by Emil Kraepelin is found in Sigmund Freud, *Jokes and their Relation to the Unconscious*, James Strachey, trans. (New York: W. W Norton, 1960), 11.

Altshuler yearns for the deconstruction of type, urging us to see in things like the pipe and the sink not static ready-mades but objects of open creative possibilities. Do not allow the market and the means of production, to steal a famous Marxian adage, dictate how we should live; let us, the consumers, do that. And yet his method remains gravity bound—the sink and pipe still bound by the rules of Newtonian physics. Not so with Perry Kulper, the next contributor up, who, while similarly keen on suspending normative reality in favor of one that is "constantly vibrating, fluctuating, and evacuating the scenes," (see page 178) is here interested in doing so by lifting gravity from the world in which matter had previously cohered. At least temporarily, and this by turning familiar objects into confetti and sending them up in the air, "a kind of cinematic sky-bound setup, where imagined stories and histories, perhaps hundreds of years apart, are enacted by fictional, two-part didactic instruments—nonsensical and seemingly purposeless, objects" (see page 178). He relies on three diptychs to illustrate his points, each a collage of disparate scenes, perhaps separated by "hundreds of years," (see page 178) pushing and pulling at each other and leaving each suspended in a cloud of moral dust. No longer is the viewer's interpretive fidelity to the past or any sanctioned narrative but to the heat of the moment. The world is not as it is but as we are, the art here seems to say. Diptychs date back to late antiquity, perhaps first conceived as books within which to write notes, but which were later popularized by Christian art during medieval times. There, the two panels of the diptychs were meant as complements to each other, tying church to liturgical figures on whose blessing the church depended. The two were a function of each other and part of a singular solar system. To create otherwise and in this case render a contradictory visual narrative between the two is to upend not only the influence of religion, but the notion that in symmetry there lies confirmation. If, previously, authenticity had been marked by the degree to which one side of the deed had reflected its opposite, with the three diptychs under study there is no such mirroring, only the shattering of which, making it clear that under these auspices there is no such thing as authenticity. Indeed, authenticity is a false premise manufactured by civilization to keep individuals from inventing new worlds and upending the status quo, usually protected by corporations, lest change may spell the corporations' demise.

Gravitational Absences

When Einstein turned Newtonian physics sideways, he did not so much pull gravity from under everyone's feet but critically change the way bonds are formed and experienced between two entities. Where Newton's world order was premised on finite parameters, Einstein's was based on relative ends, calibrated next to such factors as atomic architecture and the speed of light. No such gravitational pulls exist in Kulper's diptychs, leaving interpretations completely open to the imaginative capacities of those who interpret—which is both scary and liberating, daring the individual to cross intellectual boundaries and more. The idea is not to give fuel to rogue independence, but to scramble the concept of authority once and for all. There shall not be one view that defines the measure and order of the day, nor for that matter the cosmos by which we live, but many, everyday mutating and entering into an adaptive exchange with the world. What one gaze may establish in truth, others will splinter into many, now converging on the same spot from many different angles. This is a game Shakespeare played in seeking to undermine the notion that his stories can be reduced to any one interpretation or even that they are knowable in any way. If there is knowledge to be had, it lies in the comedy of errors that ensue when his actors constantly pivot and change their relation to each other on stage and to the audience across the way. Truth in this case is necessarily the residue of conflicting opinions and hardly the synthesis of rational forces. It does not happen by focused study but by accident and well after the exchange of words had taken place.

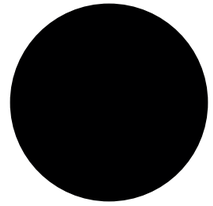
Shifting Eyes

The gaze troubles Behnaz Farahi too, our last but not least contributor to this section of the book. In her case, the headline is the male gaze, for years the source of female objectification and other

psychological harm. She wants to correct this myopic exchange between the sexes not only to restore to women social and professional respect, but more importantly establish between the two a meaningful and productive common ground. And yet, how? She faces an uphill battle, not least because while you can legislate against physical attacks, you really cannot do the same with the invasive eye. The eye is shifty and hard to pin down. With his focused gaze, one man may mean appreciation, another lascivious intent. There is really no easy way to hold the gaze responsible. But Behnaz finds a way, and this through the fashion runway—an event that features young women parading their ware where men can hide behind the fact that the event gives them license to gaze. The repercussions can be similarly problematic, finding expression in expectations that are not only unrealistic but dangerous as well.[6] The problem is real and requires a response equal in force to the invasive manner with which the male gaze had penetrated the female psyche for a long time. It requires taking up arms and the means to match in female power male dominance. Regular strength will not do it, but the blending of flesh and metal might, turning the female body into a cyborg that can fight back.

Which is what Behnaz proposes, fusing body and machine in a campaign to amplify the body's capacity for resistance and, in effect, put men on the spot. To get there, she drapes a "spacesuit-like outfit" (see page 102) over the subject of her experiment, the catwalk models, and then attaches "a custom-made headpiece fitted with two tiny cameras. The cameras track and capture the movements of the model's eyes, enlarging and displaying them on four monitors mounted on moving robotic arms glaring back at the observer. The gaze of the model is thereby directed back at the viewer, extended and enhanced through cyborgian technologies" (see page 102). What had been projected by men is now projected back at them and in such a way that resembles one individual striking another in the face, placing the offense of the gaze at the same level as those that amount to battery charges. Having been attached to an "arm," albeit a robotic arm, the eye now doubles and triples in power, physically and not merely passively awakening in the offending male a certain realization. Where Shakespeare had splintered the gaze, opening the field of truth to multiple interpretations, Behnaz restores it back to its former singular order, packing a punch like no other and in effect knocking men temporarily unconscious. No longer could men pretend to not know the impact of their eyes. The armed eye forces that knowledge out in the open by watching what the watcher is watching and making clear the optics at play. Like Donna Haraway before her, Behnaz does not mind the infusion of technology in our lives, if by such infusion we can open new channels of communication, in this case between women and men, or as one author said of Haraway's work, "new opportunities for coalition politics to resist the colonizing tendency as well as new possibilities for pleasure."[7] If Behnaz's robotic arms are confrontational, indeed militaristic, they are also ameliorative, in the end seeking "new possibilities for pleasure" between genders based on mutual respect.

In all four contributions there is an implicit critique of evolutionary thinking, namely that we are where we are less because of creative decisions and more because of incremental and adaptive changes to the environment. Progress is not really a matter of innovation, the story goes, but a selfless adaptation to changing conditions. Between moment and moment there is inevitably a difference, but it is so miniscule it can hardly be detected by the naked eye. You really need to elevate to see it, and see history in two-hundred-year chunks. The human hardly has any say in the matter and, should he or she intervene, it is less to affect historical time and more to cure a psychological ill. Nonsense, say Andrew, Perry, Joseph, and Behnaz. Why should stairs, walls, and windows fit a market mold, or in any way codified behavior? The same with architectural production, still stuck in a linear mode of operation that starts with the architect and ends with the building, making standard stops at plans, sections, and elevations, but also models. The same also of social practices that have made it possible for men to fly under the radar and continue to oppress women. It is time for a kink in the road, a new look askance, before necessarily returning to familiar paths. Serious humor and technology play a key role, on the one hand making light of standardized application, on the other weaponizing, if only theoretically, female attack on male domination. The change is timely.



6 Stories of runway models, but other women as well, trying to maintain a Barbie body to meet those expectations through an unhealthy eating regimen is legendary, in some cases resulting in lasting damage to various organs of the body and in some deaths.

7 Rebecca Pohl, *An Analysis of Donna Haraway's A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century* (London: Routledge, 2018), 11.

Bibliography

Axelrod, Mark. "Gazing from the Inside: Lacan and an Endocrinological Notion of the Male 'Gaze.'" In *Notions of the Feminine*, 87–94. New York: Palgrave Macmillan, 2014.
Boyer, Christine. *Dreaming the Rational City: The Myth of American City Planning*. Cambridge, MA: The MIT Press, 1986.
Crampton, Jeremy and Stuart W. Elden, eds. *Space, Knowledge and Power: Foucault and Geography*. London: Routledge, 2016.
Crossley, Nick. "The Politics of the Gaze: Between Foucault and Merleau-Ponty," *Human Studies* 16, no. 4 (October 1993): 399–419.
Foucault, Michel. "Of other spaces: Utopias and Heterotopias." In *Rethinking Architecture: A Reader in Cultural Theory*, edited by Neil Leach. London: Routledge, 1997.
Freedman, Barbara. *Staging the Gaze: Postmodernism, Psychoanalysis, and Shakespearean Comedy*. Ithaca, NY: Cornell University Press, 1991.
Freud, Sigmund. *Civilization and its Discontent*. Translated by James Strachey. New York: W.W. Norton, 1961.
Freud, Sigmund. *Jokes and Their Relation to the Unconscious*. Edited and translated by James Strachey. New York: Norton, 1960.
Haraway, Donna. *The Companion Species Manifesto: Dogs, People, and Significant Otherness*. Chicago: Prickly Paradigm Press, 2003.
Hirst, Paul Q. *Space and Power: Politics, War, and Architecture*. Cambridge, MA: Polity, 2005.
Krips, Henry. "The Politics of the Gaze: Foucault, Lacan and Žižek," *Culture unbound* 2 (2010): 91–102.
Lemke, Thomas. *Foucault's Analysis of Modern Governmentality: A Critique of Political Reason*. Translated by Erik Butler. New York: Verso Books, 2019.
Mumford, Lewis. *The Golden Day: A Study in American Literature and Culture*. Boston: Beacon Press, 1957.
Pager, John. "Foucault's Dispositif and the City," *Planning Theory* 7, no. 1 (March 2008): 51–70.
Plate, S. Brent. "Lacan Looks at Hill and Hears His Name Spoken: An Interpretive Review of Gary Hill through Lacan's 'I's' and Gazes," *Postmodern Culture* 6, no. 2 (January 1996).
Pohl, Rebecca. *An Analysis of Donna Haraway's A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century*. London: Routledge, 2018.
Strean, Herbert S. *Jokes: their purpose and meaning*. Northvale, N.J.: J. Aronson, 1993.

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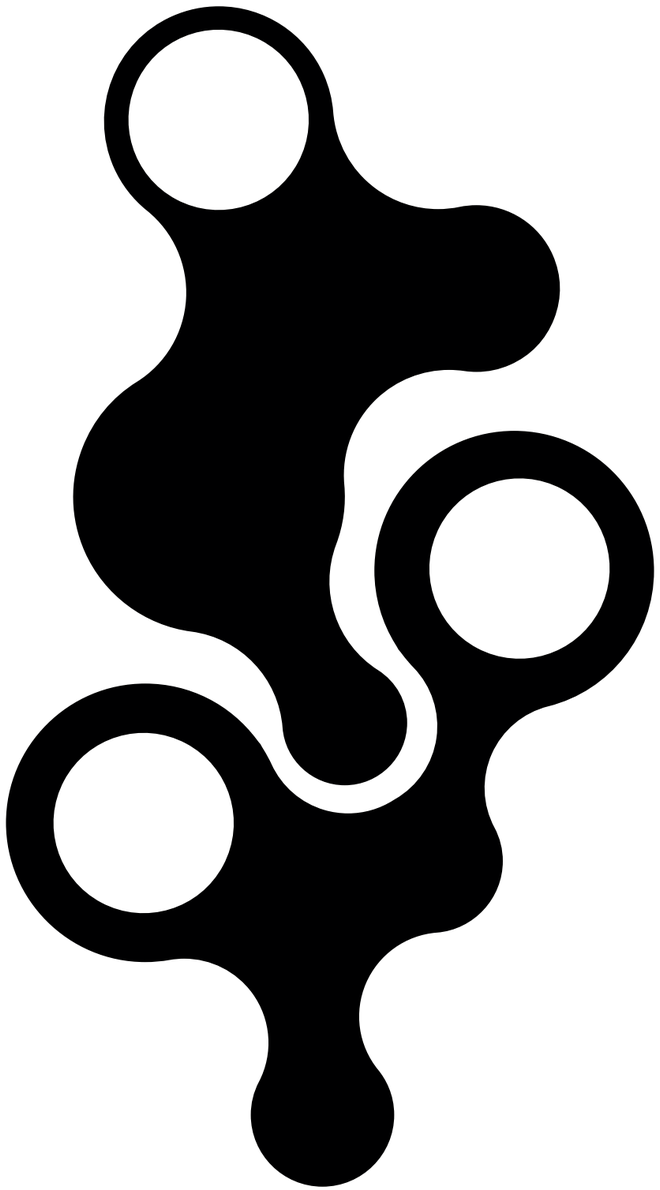

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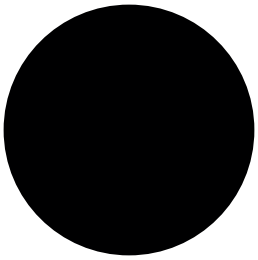
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