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INTERIOR FUTURES

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Habituated
Mediated

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Augmented
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Abstracted
Negotiated

INTERIOR FUTURES

Edited by:
Graeme Brooker
Harriet Harriss
Kevin Walker

Afterword
Charles A. Matz

Interior Futures

Edited by: Graeme Brooker, Harriet Harriss, and Kevin Walker
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Afterword

INTERIOR FUTURES

Introduction

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Predicting the future might be impossible, but imagining the future is an obligation shared equally among sentient humans. We are as uncertain of our technological, political, economical, ecological, sexual, spiritual, social and spatial futures as we ever were, exposing the pointlessness of our present anxieties. The question is not whether the dimensions of our existence will change, but which ones will assume pre-eminence.

Technology is assumed a likely forerunner. It's expected to not only maintain and improve our lives, but to extend them too. Cognitive enablers, implants, prosthetics, telepathic interfaces, artificial intelligence and gene editing make humans the ultimate design-space. Yet, like any other parasite, technology needs a host, a product, space or person to feed off of, in order to survive.

For a product designer, if a new product lasts more than a year before modifications and upgrades are needed, it's considered exceptional. For a spatial designer, material outcomes need to endure far longer, potentially for decades. There is perhaps more at stake and greater exposure to obsolescence than that experienced by other designers.

For practicing interior designers, having some sense of what the future interior might look like could redirect an entire company towards nascent market opportunity and profitable expansion, or toward the siren-sound of a speculative investment resulting in failure. For an interior design educator, it becomes a matter of choosing between a curriculum that emphasises disciplinary traditions or one that prioritises pan-disciplinary skills and behaviours: particularly those that can adapt to rapid and often unforeseen change. Evidently, the risks are high, but then there is no innovation without risk.

Since entering the so-called Anthropocene, whereby the evolution of the planet is largely in the hands of humans, we no longer see ourselves as separate points on a linear Cartesian plane, but—involuntarily perhaps—part of a networked,

co-dependent but also contingent collective, permitted an existence by virtue of how things are, not how things necessarily should be. It's not surprising, then, that we are also wise to the false promises of future trends: the products, spaces and services that dangle 'solutions' to some of our most pressing needs. Instead, strategies, propositions and tactics have superseded solutions and offer suggested rather than prescribed ways of doing things, void of any assurances—other than some form of transformation.

Experiential temporality

Michel Foucault discusses the writing of a book as a transformational experience—not knowing exactly how it will turn out, and emerging at the end with his thinking transformed.[1] We could of course say the same about this book, with over 40 authors, but what emerges for us most strongly is to similarly think of the interior as transformational experience—situated in time, and not always in space. It's there in the title: *Interior Futures*. But looking at each of those terms through the other, the future becomes a destination and the interior becomes a condition, a process, a vehicle for getting there. "Interiority," writes Charity Edwards herein, "can no longer considered to be limited to a three-dimensional extent or fixed as an isolated moment in time, but rather, is experienced as an assemblage of power, technologies, and dynamic relations." This infrastructural, non-spatial, networked view of the future and the interior is echoed by many other authors, who sense in their work that the future of the interior is in its liminal capacity to be many things and also none, all at the same time.

So dynamic are these relations that, not only are there many possible futures and countless untold stories of past interiors (both are abundant in this book), but time itself takes on a nonlinear quality in relation to interiors. Interiority is experienced, says Edwards. Mark Pimlott writes of "the rooms of our experience," while Francesca Murialdo discusses "experiencing interiors." The psychologist William James suggested that it doesn't make sense to think of material spaces, bodies or things; there is only "pure experience" of which

everything else is composed. To illustrate, he used as an example someone reading a book in a room—something you may be doing now. There is your experience, and what he calls the "room-experience." You have had, are having, and will have emotions, decisions, movements, etc; the room has a physical history, a present and future condition. You are situated in the room at this time (and perhaps other times), but the room also resides inside your mind—as do the book and the words, and the experience of reading this book, in this room at this time. "As a room," he writes, "the experience has occupied that spot and had that environment for 30 years. As your field of consciousness it may never have existed until now." The room will change and you will too, but your mental image of the room might be fixed in time, it might be flawed, it might be forgotten.[2]

Fiction is therefore a necessary device used in this book. It is one of your vehicles for understanding this nonlinear journey to the future. You will be prompted to imagine all sorts of places and times. But language is limited in conveying experience. Sure, there are some pictures too, but we would urge you to look at ("read" is the wrong word) a graphic novel called *Here* by Richard McGuire—a nonlinear story about an interior past, present and future that's free of words.[3] In developing and positioning this book, we often asked each other, why speculate on the future? And what are the conditions for these speculations? Elizabeth Grosz is very clear about the conditions for speculating in *Futures:Cities*: Architecture insisting that futurism is a projection that can only ever be rooted not just in the physical present, but also as a shadow of what we already know. We asked ourselves in this book how might all of the contributions in this project take flight from the everyday and transcend time and place? Some authors decide we can examine the future as an entity embedded in the present, right before our eyes, in environments that we are already familiar with. Restaurants (Dinah Casson), retail environments (Gregory Marinic), museums (Harriss), houses (Naomi Stead) all contain within them the beginnings of the future—an entity that needs to be exposed and articulated.

Nonlinear futurity

Time, therefore, is the raw material of the futurist. In this book, Elizabeth Gill, Douglas Gittens, and Julian Woodcock skillfully blend time in their future archaeological study, seeing human development over time not as progressive steps but "phase shifts" into which society folds; whereas the interior is "the unfolding of the future in realtime," according to Ross Exo Adams. Several chapters describe experiments combining past, present and future, including Caroline Claisse who takes several pasts of a single interior and mixes them with multiple present voices, using new technologies combined with old, familiar materials in situ.

Such interventions can expose the means of production, signs of construction, and evidence of labour in an interior, as discussed by Barry Curtis, Naomi House and Monika Parrinder. Andrew Crompton finds the separation of classes behind the walls of historic homes—what Adams calls "Empire's insides." Pimlott zooms out to detail the history of enclosure as an enclosure of resources, and Christopher Patten identifies a backlash against "globalisation," made chillingly palpable in Amy Campos' contrasting visions of survivalist bunkers. If interior was once a space of withdrawal from the world, Adams tells us, "today, interior has replaced the world. Withdrawal is no longer possible."

With screens and social media and drone deliveries (Patrick Macklin), the blurring of work and leisure, and the "sharing economy" turning intimacy into an economic asset (Fosbury Architects), "the border between real and virtual is blurred, and it doesn't matter anymore," Murialdo writes in her analysis of Airbnb interiors. We need the individual "environments of resistance" catalogued by Fosbury.

The streets, meanwhile, become a distributed interior for those displaced by socio-spatial inequality, as in Evelyn Kwok's chapter. Valerie Mace speaks of the "transient domesticity" of the urban interior, using a phenomenological approach to link past, present and future.

When everything becomes interior, asks Terry Meade, where are the boundaries between public and private, inside and outside in creating meaningful living spaces?

They are performed over time, not space. The "continuous interior" that Meade and others see emerging can be viewed as discontinuous in time, punctuated by acts of enclosure or resistance, as seams or smoothing over—not just transient but transitional. Rod Adams and Lucy Marlor describe the interior as staged performance rather than static spatial practice—as "narrative experience" or "spatial encounter" with a fluidity of performance related to site.

As scenes set within semi-permeable membranes of the built environment, set design, framing, composition, sightlines and stagecraft come to the fore—whether the consistent "staging" of Airbnb interiors (and "experiences") or the weekly cardboard constructions described by Kwok, or Crespi's "leftover" spaces—a "design of the unfinished" in which "every crack, fragment, and track of the past in this leftover turns into a powerful medium of a new aesthetic code." (This aesthetic is inevitably appropriated for "authenticity" by the likes of Starbucks.) [4]

We each become authors of this "daily drama," Crespi tells us. But we're also actors, our movements creating a spatialised language, a creative tool for spaces to be enacted and performed—Virna Koutla, too, describes an understanding of interior futures as open-ended processes rather than delimited and pre-conceived spaces. As we perform and move within and between spaces that may be staged for some scenes as domestic, others for work, leisure, transport or transition, each might achieve temporary stability "as an equilibrium of non-aligned bodies set in constant motion," writes Adams.

We must regard the interiors as actors as well, sometimes literally performing (Mark Taylor); sometimes moving from place to place, as with Kwok's pop up domestic spaces; in the nomadic New Domestic Landscapes described by Curtis

et al.; or in transport—the historian Daniel Boorstin describes the experience of airline travel as traveling through time not space—sitting in a bland, darkened tube for a number of hours and emerging in another country.

Relational interiority

The interior thus hosts relational, inter-subjective exchanges, as Koutla says, wherein the tasks performed create the possible environments to be enacted. But when interior is a web of relations (Susie Attiwill), who's the spider? Who's the naked mole rat (see Julie Freeman) and what lives in the walls? Maybe the walls themselves are alive (Liao and Zheng).

With interiority as a temporal condition, our bodily immune systems constantly decide what is part of us and what is foreign: "Every aspect of ourselves that we have been or will be, from the single cell to the integrated organism, from five seconds ago to now, exists by detecting and comparing self to non-self, predicted to observed, interior to exterior." [5] In interior futures, we can expect that the spaces surrounding us will do the same. Both will be subject to entropy, and Alex Schweder identifies the bathroom as one of the key sites to face or to fight it.

"The important thing," Deleuze tells us in Attiwill's chapter, "is to understand life, each living individuality, not as form or as a development of form but as a complex relation between differential velocities." Thus looking through the lens of time, Helga Schmid brilliantly inverts the normal relation, transforming internal time (chronobiology) into interior space. "The typology of a home," she says, "becomes irrelevant when the bodily rhythm provides new criteria for dwelling."

The condition of interior, therefore, "admits no limits, despite the fact that limits are what define it," according to Adams. "Interior is sea-like architecture. It is fluid space without dimensions, whose orientation is permanently relative." Importantly, Edwards situates this literally within the planetary-scale ecology of the sea, involving myriad human and non-human

entanglements. After all, the things we send into the air and the water don't recognise domestic or political boundaries, and as a result, she says, "real violence against non-humans is embedded in design decisions."

Alas, we cannot turn back time or entropy. But with a fluid and temporal approach to interiority we can, for example, create what Crespi calls "reversible installations" and we can observe and change what Kwok describes as a "temporary but repeated socio-spatial system."

In essence, *Interior Futures* is a project that captures multiple speculations and reflections on emergent conditions for space and ideas. We hope you find in reading this book, as we found in writing it, a transformative experience such as Foucault described, or what Koutla calls "the capacity to begin, the capacity to start anew, the capacity to compose, decompose and recompose." In reading this book, the responsibility to fuel this transformation transfers from author to reader.

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Volume 1
Habituated
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The interior of the future will be habituated. Traditional typologies separating work from home, analogue from digital, private from public will be disrupted, deconstructed, re-defined, and re-deployed – until relentless change becomes the habitual pattern of our lives. Only when we admit to ourselves that we are ageing, will we acknowledge the need to design for a future without us present in it. Everything habitual, familiar, and known, will be under scrutiny. From the hetero-normative assumptions that have calcified typological evolution, to the corrosion of space standards resulting in tiny homes. Subsequently, only the spaces allocated to tactile intimacy, safety, contemplation, nostalgia, and olfactory pleasure will drive typological transformation, not the technologies that have seduced us within our current cultural context.

Interior Futures
Habituated

Survivalism, Interiorisation and Exclusivity

Amy Campos
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Abstract

This chapter outlines a historical tendency towards isolationism and self-interest in the face of calamity and will offer historically anchored precedents, as well as an evaluation of the new survivalist movement and its necessity for completely interiorized spaces.

Fig 1 - Las Vegas Bunker barbecue.

The smell of paprika from the grilling hamburgers wafted past the barbecue and over the lawn to mingle with the chlorine scent of the pool, and then beyond into the deep mountain view of the twilit night. Stars began to twinkle more brightly in the pink and blue-hued sky above the pine forests as evening approached. It was a perfectly calm night in the mountains but for the unfamiliar, steady whir of the ventilation system. Hidden behind the mural of the forested mountains, an elaborate HVAC system pulls the scented air into a tall shaft up to the open Las Vegas desert air 26 feet above this underground bunker.[1]

At ground level, there is an entire upper middle class suburban house built as a decoy for the entry to the bunker. The grade-level house serves solely to keep the bunker hidden from safety-seekers during nuclear fallout. Back underground, the idyllic scene of the evening barbecue is joined by an adjacent luxurious home, built with the most modern amenities and the latest décor including sauna, hot tub, swimming pool, putting green, dance floor, "exterior" grounds complete with spigots to water fake plants and, of course, the barbeque. The home includes Hollywood production-level lighting installed throughout the facility with settings for day, dusk and night[2]—thus the twinkling stars. The ample rooms of the house within the bunker are finished in plush pinks, crisp whites, and rich golds. The kitchen includes white cabinetry with pink trim, flanked by gold and pink fine lattice wallpaper and a pink and white lattice vinyl floor.

Bathrooms and bedrooms feature thick pink carpets and even a color-coordinated pink toilet. The dance hall looks out on the mountain-scene murals through glass doors trimmed with pin-tucked golden curtains. The details of luxury here must have come with increased expense, given the complexity of construction so deep underground.

Across the globe, while the hamburgers reach a perfect medium rare, swarms of panicking people rush down the stairs from the siren-filled street into Pankstrasse U-Bahn station

Fig 2 - Las Vegas Bunker kitchen.

underneath Berlin.[2] Narrow doors in the station's dank concrete and stainless steel corridors are propped open to reveal hidden rooms. Silhouetted bodies anxiously shuffle into the dimly glowing spaces beyond the station walls. Upon entering the first room, each person is issued a standardized tracksuit to change into, leaving all previously contaminated clothing behind. Next, frightened, track-suited herds are guided through a series of airlocked doors into internal corridors.

In the event of a total power failure, corridors are coated with glow-in-the-dark paint to guide the crowd past seemingly state-of-the-art medical facilities, as people move deeper into the facility. In actuality, the clinic is only prepared for giving birth, and just out of site, is stocked with an alarming number of body bags. The clinic functions symbolically as a cue for calmness – people feel safe knowing that there is a medical facility on site, even if it is not as fully equipped as it appears. Further along, an intentionally small, inefficient mess hall extends the time necessary for food preparation in order to keep an anxious population busy. Colour-coded bowls ensure that the entire population is fed before anyone attempts a second helping.

While people are busied through the various spaces behind the station walls, trains pull in and stop at the platforms, while large doors close across the tunnels. These tunnel doors are not airlocked, but by the time the population is shuffled, moved, changed, assigned tasks and settled in, they have hopefully forgotten the particular details of protection and are comforted by the memory of decontamination rather than the actual precision of it. Train cars, platforms and lounges transform into sleeping areas. The train car doors open and cots from the station are pulled out onto the platform and into the train cars. The airlocks and medical facility, like most of the amenities designed into the station act as psychological defence more than physical protection. The spaces are designed to distract and calm, manage and busy a population near panic during a nuclear attack.

Fig 3 - Pankstrasse station glow-in-the-dark corridor.

The bunker house and the subway shelter may seem like science fiction extremes, but they are real Cold War-era constructions that still exist today, preserved as examples of a well-founded cultural paranoia for calamity and crisis.

In West Berlin, at the height of the Cold War in 1977, the U-Bahn system was extended along the U8 northbound line and with it a multi-purpose underground bunker intended to house up to 3,000 West Berliners for two weeks in the event of a nuclear attack within the Pankstrasse station. In many ways, this defence shelter was a placebo for a geographically isolated West Berlin population. With 75 percent of the U-Bahn stations housing some kind of defence shelter, in reality they could only have housed about 1 percent of the population. They were never put into use as shelters.

Like Pankstrasse station, the American Cold War-era counterpart of the bunker house was never utilised for its intended purpose. The owner, Girard Henderson, was a wealthy American and huge proponent of private underground bunkers who sponsored a "Why Live Underground" exhibition at the New York World's Fair in the mid-1960's. In 1978, he built this Las Vegas bunker for his family and as a prototype for his new company "World Underground Homes". His 15,000 square foot single family home was designed to house one family comfortably for up to a year. The incongruity of the real barbeque within such an elaborate simulated landscape seems an extreme absurdity in the context of nuclear attack and societal collapse, especially when you consider the complexity of the ventilation required for a barbeque housed 26 feet underground. But absurdities like these can provide a necessary sense of comfort, familiarity and control in the context of unthinkable catastrophe.

The precedent of the isolated enclave, as an extreme form of preparation in the face of impending disaster, has existed for millennia all over the world. The 14th-century Italian town of San Gimignano was located along a well-travelled pilgrimage route. As the route

Fig 4 - Survival Condo Project section graphic.

became more popular, there was a growing desire for bigger palaces amongst the wealthiest inhabitants within this increasingly dense town. In order to build bigger and more elaborate palaces, within such a geographically dense town, the wealthy started to build vertically, producing taller and taller towers to expand their palaces and symbolically display their power and wealth in built form. At the same time, a chasm between the wealthy and the poor populations was expanding and becoming more and more tense. Building up provided a physical separation from the common thoroughfares and therefore protection from robbers and rivals.

Today, there is a new wave of very wealthy patrons investing in highly exclusive, isolated and luxurious properties. They are investing usually out of a fear of climatic or political catastrophe and the inevitable class warfare that follows an extreme lack of resources. Rather than building symbolic displays of wealth and power within their existing communities, these constructs are typically very isolated and difficult to find. Often called 'preppers', new survivalists range from the relatively practical (Californians having a three-day earthquake kit stashed in their backyards) to more long-term stockpiles of food, medicine and supplies (for those who have the space for it), to the very extreme and exclusive (with bunkers, safe rooms and entire remote properties outfitted with helipads, self-sustaining power, water sources, and facilities to grow and produce food indefinitely). This last subset tends to attract the very wealthy, as most people, even if they wanted to, cannot afford to prepare for doom in such an elaborate and expensive way. Most of these survivalist models include all the essentials for survival in the case of total societal collapse and are completely interior, isolated enclaves with intentionally little connection to any exterior community.

A contemporary version of this prepping phenomenon comes in the form of the Survival Condo Project development outside of Wichita, Kansas. The Survival Condo Project is built within a subterranean renovated cold war era Atlas "F" missile silo meant to protect against

A Room Without a View

A cold-war era missile silo hidden in the Kansas prairie has been converted into luxury survival condos providing a safe refuge for those worried about the future.

POWER
The facility is connected to the electric grid but also has a wind turbine, two diesel generators and a battery bank.

EARTH-COVERED DOME

Electrified perimeter security fence

Swimming pool

Elevator and stairs

Parking

Mechanical

Medical and security

General store

FARMING
The old missile control center is home to the hydroponic gardens and aquaculture system.

CAPACITY: 75 people

RESIDENTIAL FLOORS
The 1,820-square-foot floors are each designed for 6 to 10 people and are sometimes sold as two separate units.

Library and classroom

Exercise gym and spa

Theater and lounge

Pumps and storage area

174 FEET BELOW THE SURFACE

← 52 FEET WIDE →

FOOD
In addition to food grown on site, each resident is provided with a five-year supply of freeze-dried and dehydrated food.

5 YEARS

SECURITY

Personnel with special forces training and full arrest authority

External and internal surveillance cameras

Various firearms

Two military-grade security vehicles

Source: Survival Condo Project
Christopher Kaeser/The Wall Street Journal

direct nuclear attack. This condo renovation survivalist model includes all the essentials for survival in the case of total societal collapse, providing many amenities and luxuries that can support up to 75 patrons for more than five years. The silo extends fourteen stories underground, a sort of inversion of the towers in San Gimignano, with a highly-secured mound at ground level that can sustain 500 mile-per-hour winds. From the purchasing website for the Survival Condo Project, "...none of the [other] options today offer the peace of mind that comes with our state-of-the-art technologies, combined with the comfort and luxury that is offered through our Survival Condo ownership opportunity. Nothing even comes close."[3]

The Survival Condo Project has its own power station, a hydroponics facility for farming food, classrooms and a library, as well as a theatre and lounge intended for mental sanity. There are a limited number of single-family condos, including the most elaborate 'penthouse' unit comprised of two full floors. Each unit is customizable for each owner, including window-sized digital screens that can be programmed with whatever scenery each owner prefers. One owner from New York City is rumoured to have the precise view from her apartment there projected into her Survival Condo. Living rooms come with gas fireplaces, not for heat but purely for a sense of comfort. The shared facilities include a gym and climbing wall, spa, a pool with waterfall and slide, a gun range, medical facilities and a general store. Security includes physical amenities like the earth-covered dome at grade with a single entrance, electrified perimeter fencing around the property, a helipad, external and internal surveillance, firearms and military-grade vehicles, as well as a fully trained team of security personnel. Upon purchase, each new owner works with the Survival Condo Team to create a unique plan to travel discreetly and efficiently to the condo from anywhere in the world whenever disaster strikes.

This contemporary project speaks to a renewed cultural tendency towards isolationism and self-interest. It is unclear where the security team would live in the event that the Survival

Condo Project would be utilized. Who flies the helicopter to take these wealthy owners to their bunkers? Where do the pilots stay when they arrive? Where do their families stay? And are there enough provisions to support the teams of staff required to sustain access to these remote locations, provide on-site farming, sustenance and security for the 75 people who have bought into the silo? There is a dog park inside, though, suggesting that a family pet would have a clear place and provisions designed into the facility. In the event of catastrophe, this luxury development calls out a striking disconnect between access and safety.

In all of these cases, it precisely is the controlled and isolated interiority of each condition that offers a constructed sense of security. It is the ability for the interior to project and conceive alternate controlled worlds, to edit reality taken to an apocalyptic extreme that offers apt warning for newly imagined interior futures. Much like the hamburger grilling in the underground bunker, one can imagine the Survival Condo Project preppers exiting the remote silo after five years in survivalist isolation. Perhaps a young woman who entered as a child, now tall and pale, exits the silo interior for the first time in her adulthood. Joined by an older couple, who once were age-defyingly primped and impeccably maintained, appear haggard and grey. Teacup Pomeranians, Greyhounds and English Bulldogs spill between the legs of the aged group of 75, out of the thick doors of the domed entrance and into the sunlight. Tentatively, they move across an unfamiliar and daunting landscape towards the helicopter and tanks, now dusty and unmanned. They stand remote and alone but for the decoratively bred dogs, unable to operate the very vehicles that provided such escape and security, unsure if or how they can leave the safety of the silo at all. The cost of familiar luxuries now seems sharply inessential in the face of true isolation.

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Author biography

Amy Campos is Associate Professor of Interior Design at California College of the Arts. Her work focuses on durability and design, with special interest in the impermanent, migratory potentials of the interior. The work spans a variety of scales and platforms, from spaces to objects, as well as writing. Recent publications include *Interiors Beyond Architecture* (Routledge, 2018) and the chapter "Territory and Inhabitation" *in Interior Architecture Theory Reader* (Routledge, 2018).

Scent Spaces and Olfactory Architecture

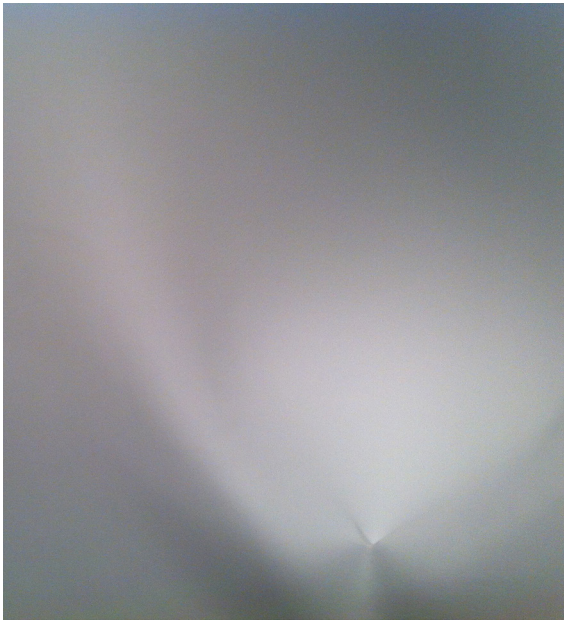
Dr Morgaine Gaye, UK

Abstract

The enigmatic sense of smell is influenced by several cultural factors which adhere to the constructs of society, a transmission of its culture and its symbolic worldview. Scents are involved in just about every aspect of society, from personal identity to class structure. Scent perceptions are deeply personal, connecting individuals to their memories and experiences. As future scenarios present us with new technology, the use of aroma is being used to counteract the alienating effects of other digital media, adding olfactory complexity to an overly sanitised environment. Taking the lead from olfactory marketing and scent branding, the use of scent, to conjure heighted experiences, may be used to create transformed living spaces which hold a catalogue of memories and moods for the future inhabitant of any dwelling. By developing personalised scent databases, each person will be able to relive memories of places, times, people and occasions, thus managing their wellbeing and altering their perception of their home environment.

As olfactory science advances its uses; for client retention, crowd control and consumer loyalty, it continues to be used without regulation. Does the future of manufactured fragrance have the potential to manipulate the masses? Will chemical reproductions of known smells alter our perceptions of the living world? This chapter will attempt to give context to how aromas are being used, and how the future might be defined by them.

Fig 1 - Air.



It may seem that the current Western perception of smell, our classifications for preference, has long stood, but in fact the history of olfaction has been rich and changing. Smell and smelling has been secret and obscene, luxurious and divine; dividing society and creating aspiration. From the heady scents of the gentry to the foul stench of the great unwashed, our history is imbued with olfactory distinctions and our life (in reference to scent) in the present day is not very different. The difficulty plaguing the world of scent is that our limited language prevents us from truly describing the personal, interior experience of a smell, but also, smelling is unique to each person so that a comparison remains impossible. How we interpret various scents is layered with meaning and modern-day points of reference

> *... fragrance is an experience which is an outgrowth of life-style trends, of fashion, of the world of entertainment, and of social and cultural pressures. A fragrance has never existed in a vacuum ...*[1]

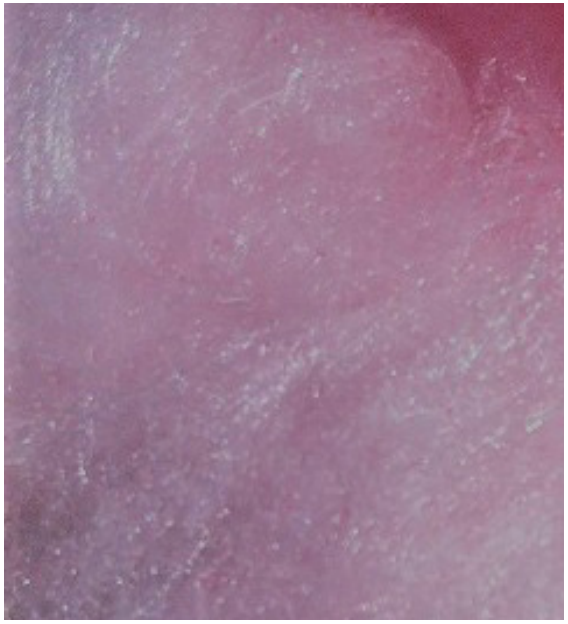
Our olfactory memories are triggered by the presence of smells, and our scent preferences are defined by experience. The whole world of scent deals with ephemeral feelings, experiences, memory and a notion of space - where language fails to match the sensory. When

Fig 2 - Smoked Salt.

we smell something (outside of our body), we relocate that aroma inside our own perception (inside ourselves). The sense of smell is the only sense to connect the amygdala, the brain's emotional centre and the limbic system, so that the intensity of experience is always heighted when olfaction is involved. Scent collapses the physical partitions but constructs a very real locale, a locus in which all our attention is gathered. Just as real as any room, smell brings together all possible worlds and makes them manifest in a moment, inside. Smell-immediate, confronting and transient - builds, dissolves and re-builds, constantly re-shaping an internal scent landscape. It is at this point of perception that scent may play an increasingly vital part in the future.

Companies have been aware of the power of smell and smelling for both influencing behaviour and for personal wellness for decades. Environments can be used to trigger a plethora of moods, responses and olfactory memories when a scent is present. As we notice the shift in the use of perfume from a necessary odour mask to perfume as cultural narrative: scent is witnessed, marketed as various journeys into the imagination, where fragrance is used to interpret aspiration. Celebrity brand extensions often include a fragrance line, with descriptions of the scent describing intricate details of

Fig 3 - Candy Floss.



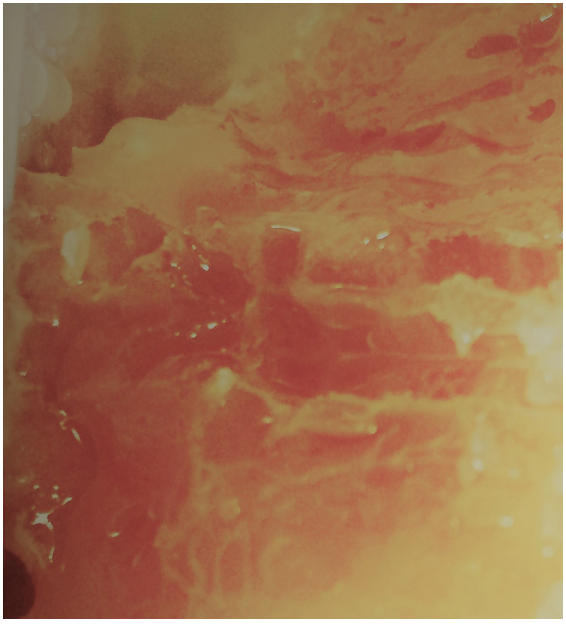
places and feelings (but never the actual aromas within the perfume itself). Perfumes are branded as dream-like voyages to the exotic, promising unaffordable luxury, nostalgia, comfort, sex appeal and notoriety. Scent connects consumers to the idea of pleasure.

It is in this juncture that scent branding is being used to create idealised realities and hyper-realistic versions of the world. Aromas transport customers into virtual architecture and into experiencing individual olfactory triggers which are intended to encourage positive feelings and therefore more purchases. From hotels to tourist attractions, signature scents are imitating foods, natural aromas or a mixture of complementary notes, and re-creating momentary memories for customers. The scents are rarely related to the product or brand in question but are used to heighten the experience of the audience present.[2]

Figure I

Japan lead the way in scented environments in the late 1980's by using computerised fragrancing systems in the workplace. They sold the idea that our most powerful memories are connected to scent and such sensory moments heighten all experiences. A popular toy shop is fragranced with the smell of Pina-Colada making parents linger-longer, but the smell of a coconut and pineapple drink bares no relation

Fig 4 - Honey Comb.



to children's toys. The scent of flowers and summer meadows was used to sell more sports shoes. Aromas attempted to transport us to romantic, happy, carefree places and we create unrelated, positive associations. Previously, luxury hotel Park Hyatt Vendome, Paris, had its own signature scent especially created by the French perfumer Blaise Mautin. All their interior spaces smelled like fresh cement poured over raw oak plank, plus fresh, ever-so-slightly cinnamon pastry dough with the olfactory texture of thick, rich tan silk.[3] This 18-ingredient scent was identified to communicate quality and high value.

In the future however, the ability to communicate an interior's value system through scent becomes ever more complex given the unique scent preferences of each customer never seem to correlate. For instance, the smell of an onion is the most prized fragrance for a tribe in Mali, and worn as a perfume. The Dassanetch tribe of Ethiopia associate the smell of cows with social status, so much so, that the urine and manure is used as a body rub.[4] Although these are extreme examples, they indicate the diverse preferences in olfactory perception and why anything from community spaces to individual products are hard to fragrance to everyone's liking. Given scent is deeply subjective and personal, to take into account personal scent preferences, the

common space or the public interiors of the future will be highly personalised. Wearable devices will emit selected scents chosen by the individual and these will be subtly emitted depending on the site-specific environment.

Figure II

Home aromas have always existed extemporaneously, with room sprays or scented candles used without regard for the distinction of what each room is used for. The use of 'edible scents' around the home - such as Christmas spice, grapefruit or cinnamon apple has always functioned as a no-fuss compensation for cooking the food itself, but what if this replaced food altogether? Disassociated scents become a common phenomena: stimulating a longing for traditional family values and nostalgia. As does masking the unpleasant smells of living and urbanisation with false aromas that perform a compensatory function of indicating 'wellbeing' without any direct correlation to locale, habitat or the inhabitant themselves.

Figure III

The future of scenting spaces is user-bespoke. No more plug-in scents with random aromas of pine, lavender or Lily of the Valley. Personalised creations of unique fragrance are specifically linked to each individual and their own scent preferences. Olfactory memories will be collated, replayed and nuanced. Aromas are used to conjure up destinations, the fragrances and pheromones of family members, celebratory events and even favourite meals. Paired with the visuals, whole worlds are brought to life within the home. Scent is the sense that makes the visual experience kinaesthetic

Previously, Sivon Reznikoff, professor at Arizona State University gave the name 'sensory engineering' to what he predicted to be the nascent future of interior design, whereby fragrancing would be designed alongside any interior environment. The design of the interior will take into consideration more than lines, volume and light but also the scent of the space. Embedded scent becomes part of our interiors, as scent-emitting technology

is controlled by the user and programmed, just like a music playlist via a virtual personal assistant. On average most people have around a 10,000-scent recall,[5] and personal scent libraries have the potential to be extensive, creating combinations of multiple scents at once. Aromas are different from room to room, and areas within the room itself, creating as many olfactory moments as the owner chooses. Also, within this catalogue of scents, the devised aromas can be configured into unrecognisable combinations. With ingredients such as flint, ozone, tobacco, earth and black musk –smells become 'mysterious, futuristic and poetic'. These descriptors become as multi-layered as the individuals tastes, always hinting at elements of the scent but never quite defining it.

Part of this future equation includes the air quality and pollution, particularly affecting our dwellings in cities. With an increasing global population, a warming planet and poorer air quality due to increasing carbon-dioxide levels, the ways in which air quality and scent will be managed helps people deal with smaller living spaces. Aside from living walls of plants and filtration systems for pollutant particles, infusing the air with aroma helps home-owners feel more content.[6] Although hard to define (like many olfactory experiences) the smell of 'fresh air' becomes synonymous with open spaces in nature. Scents, mimicking nature and therefore 'wildness', create more harmonious environments, increasingly necessary as cities deal with more inhabitants and smaller homes. Previously, factory bosses in Japan used specific aromas to create harmony, stimulate production and alleviate boredom,[7] and this manipulative trend has become ubiquitous. Workers are seemingly compliant, since after twenty minutes humans become so accustomed to a specific scent that they no longer consciously smell it, although the scent itself continues to be subconsciously effective.[8]

Regarding the subliminal effects of aroma, there is a counter position to this future potential. Managing moods and designing utopian interiors via scent has resistance, and even fear, around the potential of a highly fragranced

future. Fragrance free zones and scent-free activism began in earnest earlier this century and gather even greater momentum, especially in North America. Environmental fragrancing to control behaviour has resisted regulation in a dystopian future, although political forces try to use it as a means of mass control via subverted and ubiquitous olfactory messaging. Humans become more scent-sensitive as an unending barrage of scented environments create more allergies and adverse health reactions. Powerful aromas will affect eating and nutrition and leakage from one scented dwelling to another will result in new forms of boundary disputes. For some, overexposure to chemical aromas result in complete desensitisation, and loss of olfactory abilities. As scents continue to mimic our real world so well, some may become convinced that real nature no longer smells as good as the artificial alternative. But much like our own private interiors, our peculiar individual differences, personal responses to aroma, scent, fragrance or odour that are never unanimous protect us from this reality. Perhaps society can, for the most part, breathe easy.

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Author biography

Dr Morgaine Gaye is a Food Futurologist and director of bellwether: Food Trends, the first food trend research compendium. Morgaine looks at food and eating from a social, cultural, economic, trend, branding and geo-political perspective. She consults to global brands on specific food trends and all elements of the eating experience from mouth-feel to olfactory perception. Her bespoke trend briefings and NPD ideation, often contribute to consumer goods and concepts. Morgaine is a frequent media contributor in print, radio and TV. She is a guest university lecturer in UK and Sweden and is on the reviewing panel for the *International Food Design Conference*, a yearly academic journal.

(In)dangered Domesticity: Tactics to Subvert an Anxious and Unsafe Interior Typology

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Abstract

This chapter offers a meaningful response to the decline of domestic safety and the rise of what we call the (in)dangered domestic interior. Inserting the panic room as a typology of anxiety that risks framing its occupants as victims, we propose the introduction of a buffer zone between interior and exterior that disperses spaces of safety within the home. In order for design to be proactive rather than merely reactive, the domestic space of the future needs to emancipate itself from a reliance on policy and regulation. To this end, designers can become more responsible by seeking to influence future legislation, rather than responding ad hoc to social crises as they unfold.

According to Richard Eckersley, we live in an insecure world where anxiety has become a way of life. The causes of this cultural crisis are complex in scale, severity and regional circumstance, but what they have in common is the false assumption that they are largely external to the home. Whether triggered by real or imagined threats, anxiety disorders are known to contribute to social isolation as people seek safety within the domestic interior – a private universe that offers respite from the dangers of the public world. Yet the domestic interior has increasingly become a perilous and even deadly spatial typology, as the scale of domestic violence indicates,. This chapter explores a meaningful response to the decline of domestic safety and the rise of the inherently dangerous, or what we call, (in) dangered domestic interior. Taking into account the material, spatial and social implications of layering the home environment with fortification fascia, such as security cameras, shutters and complex locks – all intended to keep danger out – we suggest that our anxious expectation of threat from outside the home might in turn serve to increase, internalise and reinforce domestic violence. Furthermore, we contemplate how tomorrow's designers can take a leading role in addressing this complex situation by re-orientating design to address the lack of domestic security, shifting the narrative from home security as a commodified strategy, towards interior interventions that look to establish spaces of safety embedded within the home. Ultimately, if designing domestic environments is as much about managing menace as it is about manipulating materials, then what parallel tactics should designers seek to adopt? And if public policy continues to fail to offer solutions that can make us safer, in what ways might tomorrow's interior designers take greater responsibility for the safety and wellbeing of the inhabitants of the spaces they are designing?

A typology of anxiety: the panic room

The 'panic room' provides the most obvious example of the commodification of our fear of external threats to everyday safety, and this market sector will become ever more popular in

future.[6,7] These protective insertions into the domestic interior range from basic metal rooms with few or no sustainable life-support facilities for $20,000 USD, to entire homes within homes costed at over $1.5 million USD. The high-spec versions offer the protection of assets, not just people, and are able to sustain life for months and even years within a 'luxury' environment.[8] At the same time, however, concealed interior spaces, such as panic rooms, risk framing their occupant as a victim, granting the perpetrator of domestic violence a layer of acoustic and visual privacy and concealing their actions from public view. This separation only adds to the spatial proximity of living spaces within our cities that already requires that we un-hear and un-see the lives of our neighbours, except where they transgress our sense of propriety and territory.[9] Heightening isolation as a result of anxiety in the face of external threat, with its potentially dangerous domestic consequences, the 'panic room' might be read as a metaphor for a particular state of mind: one that needs to be deconstructed to address the home as a malevolent space, and its agency in casting the inhabitant as a victim of the space. The subversion of this anxious typology might help to establish interstices of safety within the home, pushing against the domestic as a typology that tends to be perceived as a 'haven' and resistant to change, yet is fundamentally more fluid: although we commonly identify the home as a safe space, we need to question this seemingly benign typology and understand how opening it up to a more complex and contradictory narrative might impact it's stability.

From interiority to anteriority: dispersed spatial tactics

Policy solutions to the rising domestic violence crisis have ranged from legal, such as extending criminal penalties as a deterrent, to the rhetorical – for example, 'awareness' campaigns rather than effective strategies. The spatial solutions offered to women often involve them leaving the family home for a refuge or 'safe-house' – a situation complicated by children or the lack of financial resources – or forcing the perpetrator to leave and resorting to (often ineffective) restraining orders. As the silent

testimony of the number of women killed at home by their boyfriends or husbands each day illustrates,[10] neither option wholly addresses the problem. Our future mental wellbeing is further put in jeopardy not only through complacency, but also through the actions of governments, such as the UK's decision in 2017 to close two-thirds of women's refuges,[11] and the US Trump administration's cut to funding for 25 multi-state violence against women programmes.[12]

Moving from the 'interior' to the idea of 'anterior' space subverts the typology of the panic room – a term appropriated from medicine, understood to mean 'nearer the front', especially in front of the body, or nearer to the head or forepart in one sense, but also 'before in time', and in this sense a form of prevention. Rather than anticipating an external perpetrator and considering threats as external, the notion of 'anterior space' operates as a buffer and mediates between contrasting needs: containment risks becoming imprisonment; interaction with a network of trusted people is in tension with retreat from them;[13] and privacy can evolve into secrecy that hinders others' awareness of what occurs within the home.

Anterior space supports the needs of the inhabitant at risk of violence from inside the home. Dispersing spaces of safety and retreat within the peripheral anterior zone, instead of hiding them away deep within the interior, as in the case of the panic room, might allow for something akin to natural surveillance in neighbourhoods. Placing home life within sight of those beyond its walls might help to control or moderate behaviour. Considering anterior space as a buffer zone towards the periphery of the home, architectural interventions and devices can avoid isolation and maintain an active connection with a wider network of people: at an architectural scale, walls, screens, apertures, and less static elements, such as curtains, contain the occupant without incarcerating her. Less hermetically sealed than the panic room, these devices, dispersed throughout the home, can be manipulated to offer privacy, yet remain permeable enough to

prevent activity putting the dweller at risk from being hidden away from sight. Architectural historian Beatriz Colomina captures the role of architectural devices in providing safety at home eloquently in her study of the interiors of Adolf Loos' houses: 'The inhabitant is both "covered" by the space and "detached" from it. The tension between sensation as comfort and comfort as control disrupts the role of the house as a traditional form of representation.[14]

Tacitly empowering standard interior elements might enable the victim to harness their environment in response to threat. Embedded within the home, existing devices and technologies could be adapted and deployed by the dweller in situations of need, lending control at a local level. Interventions and tactics of appropriation at this scale might include the reanimation of domestic objects and adapted furniture. These tactics are to be understood propositionally, offering a frame to inform future design projects that not only consider safety, but also comfort within the home. An existing example is the doorbell that when rung connects to your phone, and can be answered remotely.[15]

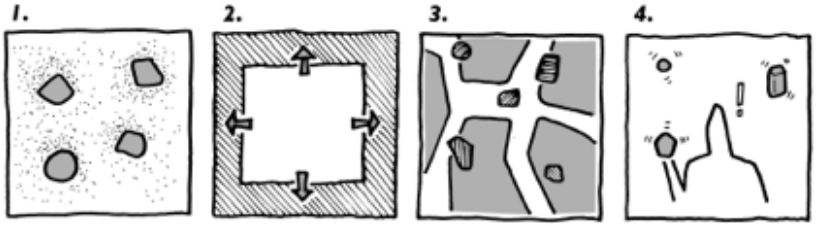
Expanding the role of the future interior designer

In order to avoid an anxiety pandemic, incarcerating increasing numbers of potential victims within violent home environments, designers need to take greater responsibility for the provision of safe spaces. In light of current systemic failures to adequately protect dwellers and offer meaningful and effective solutions for victims of domestic violence, the home environment needs to offer a range of tactics that lend the inhabitant-at-risk greater degrees of agency over her own well-being. The notion of 'anterior space' here is proposed as a means of thinking differently about the domestic interior.

Such tactics are, as yet, not enshrined into building codes, akin to fire regulations, nor do they consider a diverse range of physical abilities. The domestic space of the future needs to emancipate itself from a reliance on policy and regulation. To this end, designers

Fig 1 - Anterior Tactics

might become more socially responsible by adopting a visionary approach to the interior that takes seriously the threats the people they are designing for can face at home. This is as much about setting precedent as it is about responding to dangerous social trends, exacerbated by irresponsible fiscal policies. It is also about carving out a distinct future role for the field of interior design that is responsible, and not merely responsive.



Anterior Tactics

Tactic 1:
Establish interstices within existing home environments that offer safety and control.

Tactic 2:
Locate these interstices at the edge, rather than embed them inside the inside, in order to mediate between the private and the public realms.

Tactic 3:
Disperse these intestices across neighbourhoods and cities, generating a network of safe spaces that reimagine the urban environment as a continuous domestic landscape.

Tactic 4:
Empower domestic objects and devices to offer agency and control to the inhabitant.

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Author biographies

Dr Harriet Harriss (RIBA, FRSA) is a qualified architect, a Reader in Architectural Education and leads the research programme in Architecture at the Royal College of Art in London. Her research concerns innovative architectural pedagogies comprehensively, and their intersection with feminist theory specifically, proposing epistemological paradigm shifts as a means to envision and implement strategies that will enable architecture (both education and practice) to become as diverse as the society it seeks to serve.

Naomi House is a Designer, Educator and Writer. Her specific expertise is in the field of interiors and its psycho-spatial dimension. Naomi's teaching and research practice focus on the agency of the interior and its role in determining and informing everyday behaviours. She is particularly interested in the use of forensic methods as a strategy for exploring and questioning how objects, environments and their interactions can be analysed, interpreted and animated.

Dr Benjamin Koslowski is an architect-trained designer. Situated between academia and industry, his interdisciplinary research focuses on how design can help to better understand interaction online and the reconceptualisation of individual notions of privacy. He has taught at a range of institutions in spatial and communication design, including the Royal College of Art, Middlesex University and the University of Greenwich.

Living in the Continuous Interior

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Abstract

In Africa, Asia and South America, large cities[1] are merging into massive conurbations. This shift will dramatically intensify in the future, as the world's population is predicted to rise from 7 to 11 billion by the end of the century, coupled with the fact that more people than ever before are living in cities. These geographically linked metropolitan areas will spread to other population centres and will persist in forming continuous interiors made up of discontinuous enclaves, where informal neighbourhoods, ghettoes, shantytowns and exclusive gated communities will increasingly exist side by side.[2] The struggle to impose order and control in such places makes little sense. As a consequence of this disorder, interior practice is ideally suited to locate and exploit places and gaps in dense urban fabric. When everything is interior, with no exterior, major questions arise about the creation of meaningful living spaces, and the position of boundaries between public and private, inside and outside. These become places where unexpected encounters, chance, discovery and innovation can be fostered through inventive design. This paper will explore the way we could think about living space in the future, as part of a much larger and active environment of a continuous interior.

"'Alas', said the mouse, 'the world is growing smaller every day. At first it was so big that I was afraid, I ran on and I was glad when at last I saw walls to left and right of me in the distance, but these long walls are closing in on each other so fast that I have already reached the end room, and there in the corner stands the trap that I am heading for.'" —Franz Kafka[3]

It seems that Kafka's mouse was right. In many ways our spaces are growing smaller, growing narrower. This is a time when global forces are transforming what it means to be grounded and located. Two significant reports from the United Nations have revealed the trajectory we are on.[4] The first was *The World Population Prospects* 2017 revision, that raised their world population forecast to 9.8 billion people by 2050, and anticipated a population of 11.2 billion by 2100. As an indication of how quickly change can occur, the world's population was 1.65 billion in 1900 and grew to 7.4 billion by 2015. The second report identified that since 2011, for the first time in history, the world's urban population had exceeded the rural population.[5] Subsequently, 'Mega-cities' were formed by the spatial spread of geographically linked metropolitan areas. As these gigantic urban areas pushed beyond their original boundaries, some have merged into massive new conurbations, urban corridors and city regions. Such immense urbanisation, covering vast areas, exploded the notion of a bounded, finite city. The future city has become a continuous interior containing a patchwork of discontinuous territorial enclaves, where informal neighbourhoods, ghettoes, shantytowns and exclusive gated communities can surprisingly be located side by side, though separated by a range of fortified barriers and security devices. These conurbations are the places where the major challenges facing the world in future, from economic and environmental sustainability to national security and housing rights are being played out. Yet the rate at which change is happening, as well as the scale and levels of complexity involved, has rendered many conventional tools for tackling the problem obsolete. As the second UN report

predicted, cities all over the world are grossly unprepared to face such challenges.[6]

Although it makes little sense to equate urban conditions in different parts of the world, it does at least seem clear that the future city offers restricted living space, isolated territorial islands, and increasing numbers of refugees, homelessness, seclusion and control.[7] These circumstances continue to raise fundamental questions for the future of the interior. What may be grasped about 'interior' when a city becomes a formless global object, and where, consequently, everything is inside? What can we understand about the politics of dwelling in the face of conflicting claims to territory or the mobile nature of contemporary society? How is it possible to carve out meaningful spaces when different forms of mobility and technology continue to alter national and local boundaries, which exponentially require complex forms of access? The creation of enclaves with their internal borders is illustrative of the inconsistent self-destructive behaviour of the present situation.

The political groundwork

A standard political response to uncertainty has traditionally involved forcing new kinds of spatial politics into being. For example, in 2013 the UK government introduced a tax on spare bedrooms for people living in housing association property. The Bedroom Tax (also known as the Under Occupancy Charge or Spare Room Subsidy) was a change to Housing Benefit Entitlement that meant claimants would receive less if they lived in a council property that was deemed to have one or more spare bedrooms. This was an idea promoted to alleviate a chronic shortage of living space in cities. People on benefits, among the poorest in society, were forced to take in paying lodgers to compensate for loss of income. Thus an essential part of British culture— that the home is fundamental to an individual's right to privacy— became the state's province. Government bureaucracy redefined spaciousness as a luxury, with people on benefits having more than they deserved.

The redevelopment of Barnet House[8] in London, flagged up another spatial issue. It was revealed

that 96 percent of the 254 proposed flats would be smaller than the national minimum space standards of 37m² for a single person. The tiniest homes would be 16m² – 40% smaller than a budget hotel room. They were legal because of government deregulation designed to promote the conversion of underused office space to help meet house-building targets. Government ministers, listening to messages from industry, preferred a market-led approach rather than mandatory application of space standards. Spaces created by market forces always retain inequalities of power, dominance and influence. Whenever rents and house prices increase, the actual space being sold has consistently become smaller.

Attempting to address problems of dwelling through either politician-led planning decisions or architect-led master plans has demonstrated a complete lack of imagination and the will to engage with the complexities of city dwelling. Cramming the maximum number of people into a plot with little or no shared facilities, or forcing people to admit strangers into private living spaces, has exposed the punitive mentality of closed bureaucratic systems. The price of forcing people into unsuitable living conditions was an increase in isolation, diminished ability, and willingness to empathise with other people, and a consequent rise in mental and physical ill health.

> *"We've known for decades from 'tower block blues',[9] characterised as a lack of space and light, good insulation for heat and sound, and agreeable surroundings, are not just design but also socio-economic issues. We learned that families watch television with headphones because they felt guilty that their neighbours might hear it."*[10]

The future, despite all this

It can be argued that people can only move forward by playing with constraints, not avoiding them. In every situation there are any number of levels of organisation in play, including ways of combating isolation and building connections. Interior design is adept at exploiting constraints, not least because the discipline has developed

an ability to be open to alternative readings of territory and inhabitation.[11] The issue of low investment in infrastructure has further exacerbated the problem, with people choosing to live in small city centre apartments rather than bigger, suburban houses, due to the cost of a commute. Subsequently, the expansion beyond boundaries, whether physical or imagined, becomes the norm for urban interiors. The future city is an open field composed of thresholds and gateways, a continuous territory no longer rigidly divided by walled enclosures. According to Attiwill, writing about Andrea Branzai: "Space is displaced by an idea of territory where movement is implicated in the production of modes of inhabitation, occupation and use."[12] Even micro-apartments can be designed to admit the interpenetration of private and public space in the city. In fact, terms such as 'public', 'private', and 'community' acquire new interpretations when relationships between interior and exterior are dynamic and constantly shifting. New boundaries are devised, and a range of found spaces within the dense city fabric will increasingly be discovered and utilised in imaginative ways. New co-housing models prevail, making use of rooftops, the gaps between buildings, and the adaptation of existing or incomplete structures.

Processes of insertion and adaptation have dramatically proliferated.[13] They become the antithesis of over-determination, and the desire for order and control. Interior practice has learned to exploit unusual spaces and creatively inhabit them. These are, after all, places for the imagination, spaces that do not fit neatly together, where unexpected encounters, chance, discovery and innovation occur. Managing the proximity of such places requires a re-evaluation of collective potential. It entails the practice of a politics of belonging instead of contained, isolated territories. It also demands acceptance of reduction of habitable space, in favour of an enrichment of surrounding services to facilitate wider needs. Ways of enhancing the sense of belonging include an understanding of how particular narratives of place are developed and promoted. It is therefore imperative that interior design remains grounded in the

complexities of everyday life—its politics, economics and material conditions. Interior design has natural extensions and connections to other disciplines, and the important quality of multiplicity. Assemblages or multiplicities are essentially concerned with movement and action. They are always made, not found. The challenge for interior design is to continue to be capable of weaving together various branches of knowledge into a multifaceted vision of the world. The way we think about living space has had to reach beyond a geometrically defined area, and become part of a much larger and more active milieu.

For Andrea Branzai, the continuous interior has come to represent interior design culture and continues to:

> *"open a new season of design experimentation and deeper inspection into the new frontiers of an urban reality that not only needs to be continuously re-functionalised in order to give hospitality to unexpected activities, but also witnesses contamination of the same business, residential and cultural activities."*[14]

So dramatic are the shifting priorities that the present is automatically assumed to be unstable. Shifts and changes have serious consequences for the way that we think about dwelling. Expanding the scope of interior design to include the city's complex ecologies, its often-unpredictable human activities, its contending interests and actors, its elusive and layered sites, is vital to enable people to engage with the reality of a precarious future.

Returning to Kafka's little fable, things do not end well for the mouse. With his room to manoeuvre curtailed and space shrinking around him, he accepted his predicament and was consequently unable to heed a call to change direction.

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Shanghai and Beijing in China; Mexico City in Mexico; Sao Paulo in Brazil.

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7. See for example, Dhobi Ghat in Mumbai and the examples in note 2 in the abstract (above).

8. Robert Booth, 'Dog kennel' flats in Barnet will be 40% smaller than a Travelodge room, The Guardian Monday 27 March 2017.

9. See for example: 'Eyrie' by Tim Winton and a review by Evie Wyld - 'tower block blues' in The Guardian Fri 30 May 2014. Available at: https://www.theguardian.com/books/.../eyrie-by-tim-winton-review-tower-block-blues.

10. Roger Graef, 'The British don't want to live in new-build homes. No wonder' The Guardian, Friday 26th October 2012.

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closer to the city centre and to reduce transport expenses. Barron says, "my neighbourhood functions as my living room". S Barhat, V. (2015) Live small, Be happy? The next new big thing. Available at: http://www.bbc.com/capital/story/2015042_why_small_is_the_new_big_thing.

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13. See for example, the Keret House. Karissa Rosenfield 'Inside The Keret House - the World's Skinniest House' - by Jakub Szczesny, Arch Daily, 3rd November 2012.

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Author biography

Terry Meade is a Principal Lecturer at the University of Brighton in the School of Architecture and Design. His background in architecture, fine art and engineering contribute to his research interests. Current research explores narratives that unfold in specific places, and how they may be used to negotiate specific spatial environments. Narrative is considered to be an inherited capability forming individual and communal histories particular to the experience of a place. Work carried out in Israel/Palestine, building houses with an Israeli peace group, has enabled issues of security (walls, barriers and borders) to inform this research through the contribution to particular narratives about domestic space.

The De-Mirror Stage

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Abstract

This chapter relies on a co-constructive understanding of spaces and subjects. Thus imbricated, environments influence who we become as occupants. Upon entering restrooms today, people see little evidence of their own entropy. The future of the bathroom lies in changing the stories it tells to its users about their timebound bodies. In the chapter that follows, bathroom-based projects that embrace bodies in flux will be presented and considered for their foreshadowing.

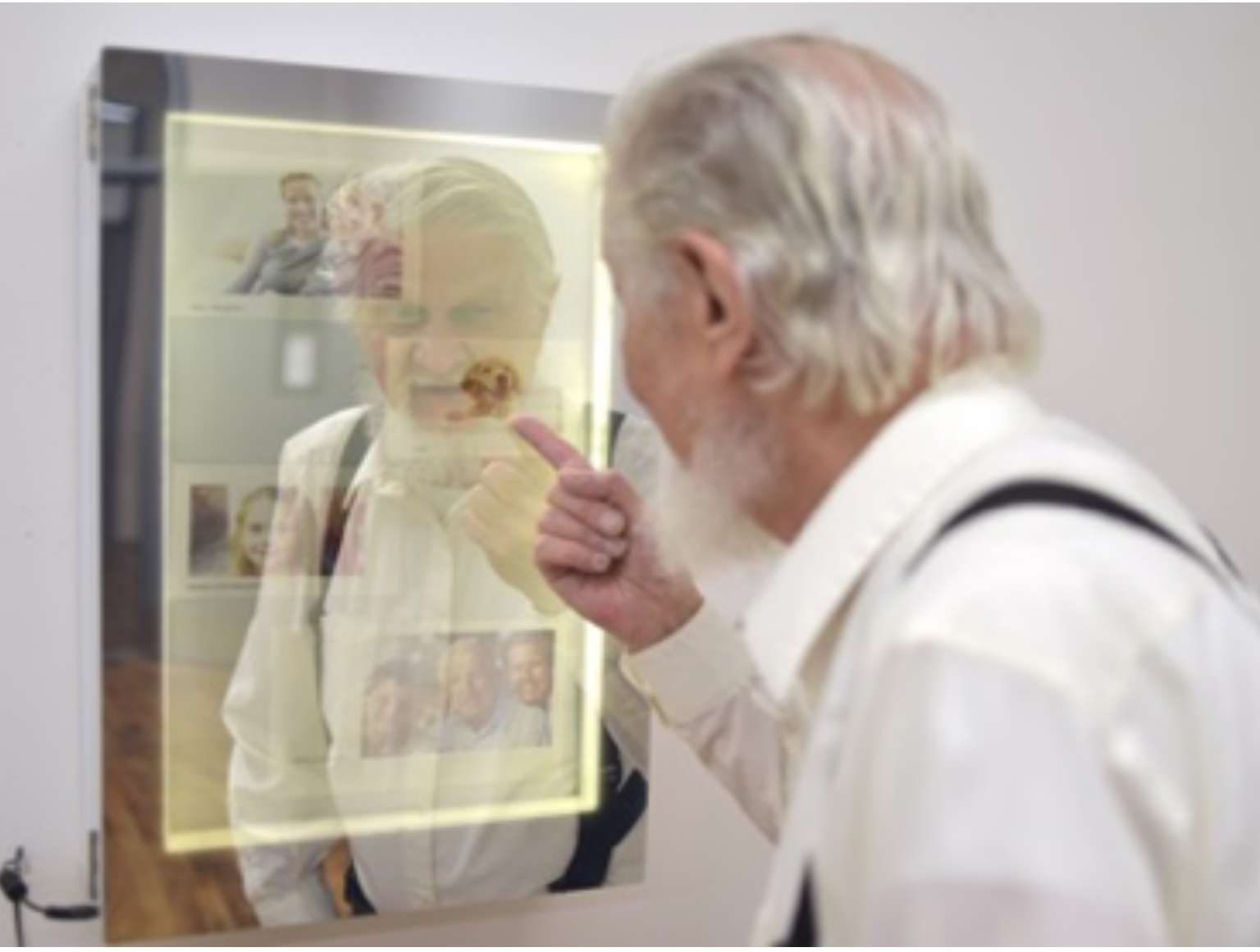

Fig 1 - Hsing Ying Lang, Mirror, Pratt Institute, 2016.

So much depends on silver-coated glass: who we will become tonight as we cover our spots and style our hair; how, as infants, we began understanding ourselves to be discrete beings separate from our environments and our mothers;[1] how we notice that we are now at the age when our mother started to lose her looks; and why there is a stranger in the bathroom staring back. It is unlikely that readers of this chapter have themselves experienced a mirror in this last way. Not recognizing your reflection is a symptom of Alzheimer's disease. As is widely known, this affliction works backwards in its erasure of memory—most recent first, and finally the distant past. For some, the picture of how they look in their mind's eye gets younger and younger, while the body continues to show its age. At a certain point, the person in the mirror that a mind afflicted by Alzheimer's perceives does not match the image of themselves that they have in their memory. Understandably, some people living with a diagnosis become disoriented, frightened, or angry when confronted with their own misaligning reflections. One's habits of self-care lose this reflective tool, and sometimes result in lipstick applied into a nostril or hair combed east while the face faces north. In short, a disheveled appearance that might look like a problem with motor skills could actually be the result of no longer being able to locate oneself in time. Caregivers for those who experience Alzheimer's with this symptom often undertake a process of de-mirroring the house. Entry halls, bedrooms, and dining rooms are common places within a home to undergo a reflection removal process. But none is more prevalent, necessary, or difficult to remove than the bathroom mirror.

My discussion of mirrors in households managing Alzheimer's is based on the research of Hsing Yin Lang, a graduate student (for whom I ran an A's research studio)[2] who identified medicine. cabinet mirrors as needing to be of two moments in time—the caretakers' and the cared for. Hsing's design approach acknowledges that removing the mirror altogether might addresses the needs of the family member with Alzheimer's, but at the expense of those

Fig 2 - Arakawa and Gins, Reversible Destiny Lofts, 2005.

who care for them. Her prototype works with this slippage between two realities by replacing the standard opaque mirrored door with one that incorporates a two-way mirror that can be illuminated from within. When these lights are on, an inner volume is revealed where familiar photos can be placed for view, rather than the reflection of a misaligned self-image. When caregivers need to brush their teeth, apply makeup, or style their hair, they can toggle back to present-time easily by switching off the inner light.

To discuss the bathroom's future today is thus to discuss how the bodies and minds that use it will age tomorrow. Current bathroom design practice accounts for the elderly with grab bars, toilet boosters, and non-slip surfaces. But like many western cultural inclinations, designing for a durational life currently focuses on bodies, to the exclusion of minds.

Departing from this Cartesian dualism calcified in bathroom codes, Shuaku Arakawa and Madeline Gins offer "*organism-person-environment*",[3] a concept of co-constructive relation involving people's bodies, their consciousness, and their environments, all of which are in a continual process of influencing each other. While Arakawa and Gins' dynamic model of being bears resemblance to Maurice Merleau-Ponty's phenomenological[4] understanding of the same interplay, theirs was formulated toward a specific goal—achieving immortality.

Exploring these ideas through several built environments under a larger project, *Reversible Destiny*,[5] Arakawa and Gins tested the idea that, by giving the body an environment that is uneven, possibly perilous, contrasting and contradictory, the minds of occupants would interpret these signals in a way that triggers the immune system. Assuming direct proportionality between the efforts of the activity of the mind and the immune system led Arakawa and Gins to make spaces that were difficult to habituate. In turn, they assert, longevity increased. Take, for example, the *Reversible Destiny Lofts MITAKA – In Memory of Hellen Keller*, completed in 2005 in Tokyo, Japan. Designed to stimulate the senses

Fig 3 - Arakawa and Gins, Reversible Destiny Lofts, 2005.

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with bright colors, curved walls, asymmetrical floorplans, and irregular floors, Arikawa and Gins asserted that the path to immortality is paved with newness. Always new, never habituated, this is how we do not die.

Whether this turns out to be the case is not consequential to the speculative approach to the bathroom that I will offer shortly. For now, let's stay with the metaphor of the path a while longer, to further consider how the bathroom figures into Arakawa and Gins' work. As the artists characterize themselves,[6] the Reversible Destiny environments consist of familiar functions joined together by pathways made of strange surfaces. Among these familiar zones is the bathroom. In part, the tension between the familiar and the strange is what they conjecture will trigger the sequence of neurons that will keep death at bay.

Writer and researcher Jondi Kean described his experience living in the Arakawa and Gins loft for a week, and the bathroom in particular, as "Like hugging the space"[7] because he was always touching the walls to steady himself as he circumambulated the cylindrical shower. In the bathroom depicted in Figure 3, the functions are recognizable. Immediately we understand where to bathe, evacuate, and prepare ourselves for public view. Though there is no doorway, these stations are separated from the rest of the house and the central shower obscures the view of the toilet behind. In so doing, cultural attitudes toward having an entropic body that can be characterized by embarrassment or shame are preserved. While I am a great admirer of Arakawa and Gins for their overall body of work, and am able to pursue my practice in part because of the groundwork that they laid, my views depart from theirs in that I want an environment that allows me to take pleasure in an aging body, rather than infusing anxiety about the inevitable fate of flesh into our environment

Ubiquitous interior plumbing and the formulation of modernist worldviews are of the same epoch. The ideas of purity[8] that define this outlook vitrified into the china with which toilets, sinks, and tiles were made. Indeed, the very

whiteness of bathrooms epitomizes how their designers saw the world, allowing cleaners to police the germs that modern science has given us language to discuss. Contemporary toilets remove evidence of our time-bound bodies as quickly and thoroughly as possible, so that we do not see the substances that shame us with evidence that we, too, will become dirt.[9] Effluvia is relocated to the outside, and the removal of its odor deemed so necessary that fans are tied to the power switches of lights. The future that the modern bathroom promised was one where sickness would be kept at bay through the ease that modern surfaces gave to controlling contaminates. Arakawa and Gins sought the same immortality through architectural space that they understood as connected to an invigorated immune system. Both approaches use space as an imperative: "Don't die." My own practice speculates that the future of the bathroom lies instead in using this space, and the habits it facilitates, as interrogatives: "How can we die well?".

Bathrooms are the perfect place to explore this question. Here our contingency is revealed. We witness the insides of our bodies becoming the outsides of our bodies: hair falls from us, fingernails are clipped, and we relinquish a host of other leakages and droppings. As Hsing Yin Lang's mirror prototype posits, there are other stories that can be told about the mind/bodies we experience in the room where both are at their most vulnerble. Lang's mirror also suggests a cyclical relation to time, contrasting the linear trajectory told by modernism. Just as Jacques Lacan's previously discussed mirror helped the infant individuate, the bathroom at large can also be a metaphoric mirror in which we see our we entropic fate come full circle. That story might be penned by Hélène Cixous[10], of the ecstatic pleasure experienced in being without limits. A feeling of connecting with everything again, mixing rather than parsing.

Stories repeated often to ourselves, even fantastical ones, become believed. After enough renditions, it becomes difficult to separate fiction from non-fiction, the stories themselves

become habitual, and we experience them as real. Currently we use bathrooms to tell ourselves that we will not die through ablution routines, grey hairs dyed and wrinkle creams applied. With a final work to close this chapter I want to tell an alternate tale—one of the pleasure that awaits us all in a future where our entropic bodies mix. Our bodies will make our bathrooms tell it a few times a day, every day, until our end, our mind listening subconsciously until then.

"Wet walls" are the thickest in a conventional bathroom because they accommodate the plumbing. Economy has designers use either side of them: Domestically, kitchen sinks and bathroom sinks abut either side, while publicly it divides gender. In either case, the binaries of food or feces, male or female, constructed on either side, become singular again when in the moist exit of shared drainpipes. That part of the narrative, though, is redacted with plaster. Plumbing Us,[11] a urinal conjoined at the back, is half in the women's and half in the men's, with but one drain hole. A person on one side sees their yellow body mixing with another, slightly more orange-coloured one, as both flow toward more mingling.

As the future of bathrooms has been imagined here, they are to become less rooms to construct a cleaner self and more places to accept our inevitable futures. Designers in the present can bring this shift about by investing these spaces with narratives about death's sensuality, about our commonality rather than differences.

Fig 4 - Alex Schweder, Plumbing Us, 2009.

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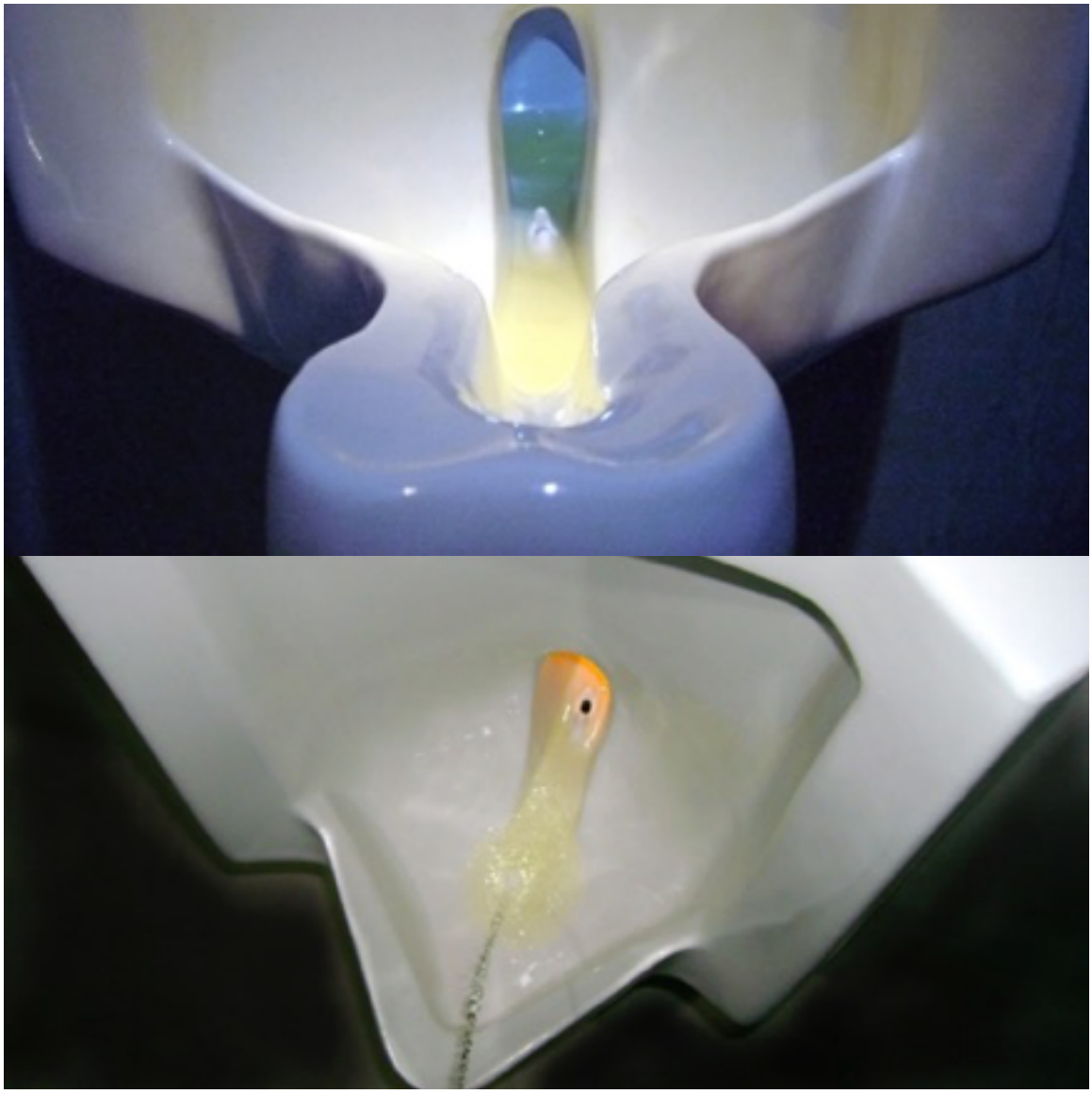

Figs 5 & 6 - Alex Schweder, Plumbing Us, 2009.

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Author biography

Alex Schweder, born in New York City, 1970, coined the term "Performance Architecture" in 2007 to encapsulate an understanding of architecture that it both gives cues for how we are to behave, and offers itself as a prop for inhabitants to form and perform their identities. Schweder's most recent exhibitions include "Counterweight Roommate", at the Museum of Modern Art in New York, and "The Newcomers" in the 2017 Performa Biennial. The Pollack Krasner Foundation and the Graham Foundation have funded Schweder's projects, and he has been an artist-in-residence at the Kohler Company, the Chinati Foundation, and The American Academy in Rome as the 2005-6 Rome Prize Fellow in Architecture. Schweder is an Adjunct Associate Professor in the School of Design at Pratt Institute in Brooklyn. He has also taught at the University of California Los Angeles, The Architectural Association in London, The Akademie der Kunst in Vienna, and the Southern California Institute of Architecture. Alex Schweder is finalizing a Doctorate of Architecture at Cambridge, received a Master of Architecture from Princeton, and a Bachelor of Architecture from Pratt Institute.

A Non-Modern Space

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Abstract

Mulitfaith spaces offer what appears to be a universal access to the divine, but unlike the sublime sacred spaces of the past they are iconoclastic non-places. How do they work and how are they designed? It is suggested that they even though they are sited in modern buildings they undermine the modernist divide between subject and object and should themselves be seen as non-modern spaces.

Fig 1 - Tate Modern Multifaith Room, Herzog & de Meuron 2016.

The third millennium has brought a new kind of worship space to public buildings such as airports and hospitals. Usually these spaces are entirely interior, with no outside walls to speak of, and located in out-of-the-way corners, often near the lavatories. Being slightly concealed, as well as in some way sacred, are signs that these things are non-modern, by which I mean something different to not-modern, or post-modern. Non-modern describes a kind of quasi-object, to use Bruno Latour's expression. These are things that multiply as if they have a life of their own.

You can find one in the Tate Modern in London, where on Level Eight of the extension, there is a white door, flush with the gallery wall, on which is written: 'MULTI-FAITH AND CONTEMPLATION ROOM. At first sight it looks as if it might be some sort of art installation. Would you embarrass yourself by touching it? There is no handle, but if you are bold enough to push it, you can step into a back-of-house corridor where there are stairs, stores, services, then round a corner, there is the room itself. [Fig 1]

It is a typical multifaith space, which is to say that it is a windowless plasterboard cell with carpet tiles and a suspended ceiling. Multifaith spaces are all different, yet somehow always the same. The only object in the room is a little white cupboard. Many of them have prayer trees that are arrangements of branches to which visitors can fix Post-It note prayers. Often there will be shoes by the door. Occasionally you will find rooms that are perfectly empty, but these seem odd because they raise a question: is there something missing? At the Tate, an IKEA cupboard answers the question you would have asked had it not been there.

This is not minimalism. With its fitted furniture and flash gap details, minimalism speaks of taste, geometry and logic, but there is nothing tasteful or logical here. Instead, there is a state of controlled banality that can easily seem sinister. Any object left in a room like this becomes significant; even flat-pack furniture becomes meaningful. The Tate Modern room resembles the disturbing installations of constructivist artist Gregor Schneider whose

Fig 2 - u r 12, TOTAL ISOLIERTES GÄSTEZIMMER. Gregor Schnieder 1995.

almost-empty rooms suggest unspeakable things that happened just before you arrived. [Fig 2] It is through multifaith spaces that the art of our own time is entering the sacred precinct, but it is not painting, sculpture or music that is crossing over. Instead we find dematerialized art installations, found objects and interactive spaces.

The spread of multifaith spaces might have been an opportunity for interior designers, but most of them are being built without professional help. Where designers have been involved, the results are often unsatisfactory through being biased to one religion or another. Some fail by being too Islamic, or too Christian, others by leaning towards sentimental Paganism by looking as if they have been furnished at a garden centre with pebbles, blacksmith furniture and art made with leaves. The most interesting multifaith spaces avoid these issues by having no designer at all. They are a vernacular expression of the contempt that comes from being obliged to spend money on something no one wants to believe in. Ironically, the results are as spontaneous and peculiar as works of automatic writing, and no less surreal. The quality of un-being they radiate cannot be faked.

Architecturally speaking, rooms like these are closets. These originated in great houses that were designed as sequences of spaces where anyone might wander, and where almost anything might be going on. In these circumstances, privacy was found behind folding screens, or in curtained beds, or best of all, in cupboard-like rooms. They reached their most refined form in the work of Francois Blondel, whose book Maisons de Plaisance, published in 1737, contains plans of gorgeous rooms connected by secret passages to servants quarters below.[1] [Fig 3] In his houses, your heart's desire could come and go through concealed doors in the paneling.

These doors connected two worlds. On one side there was life and art; on the other, winding passages and work. Which side you found yourself on was more or less a matter of chance.

Fig 3 - Secret passages and closets. Maisons de Plaisance, Blondel 1737.

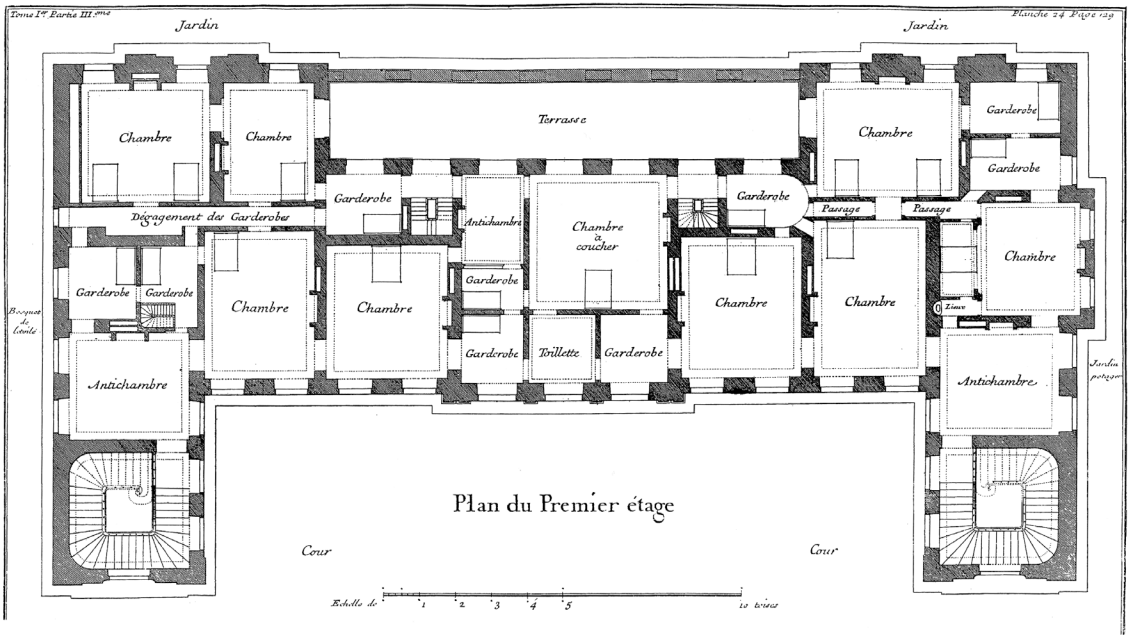
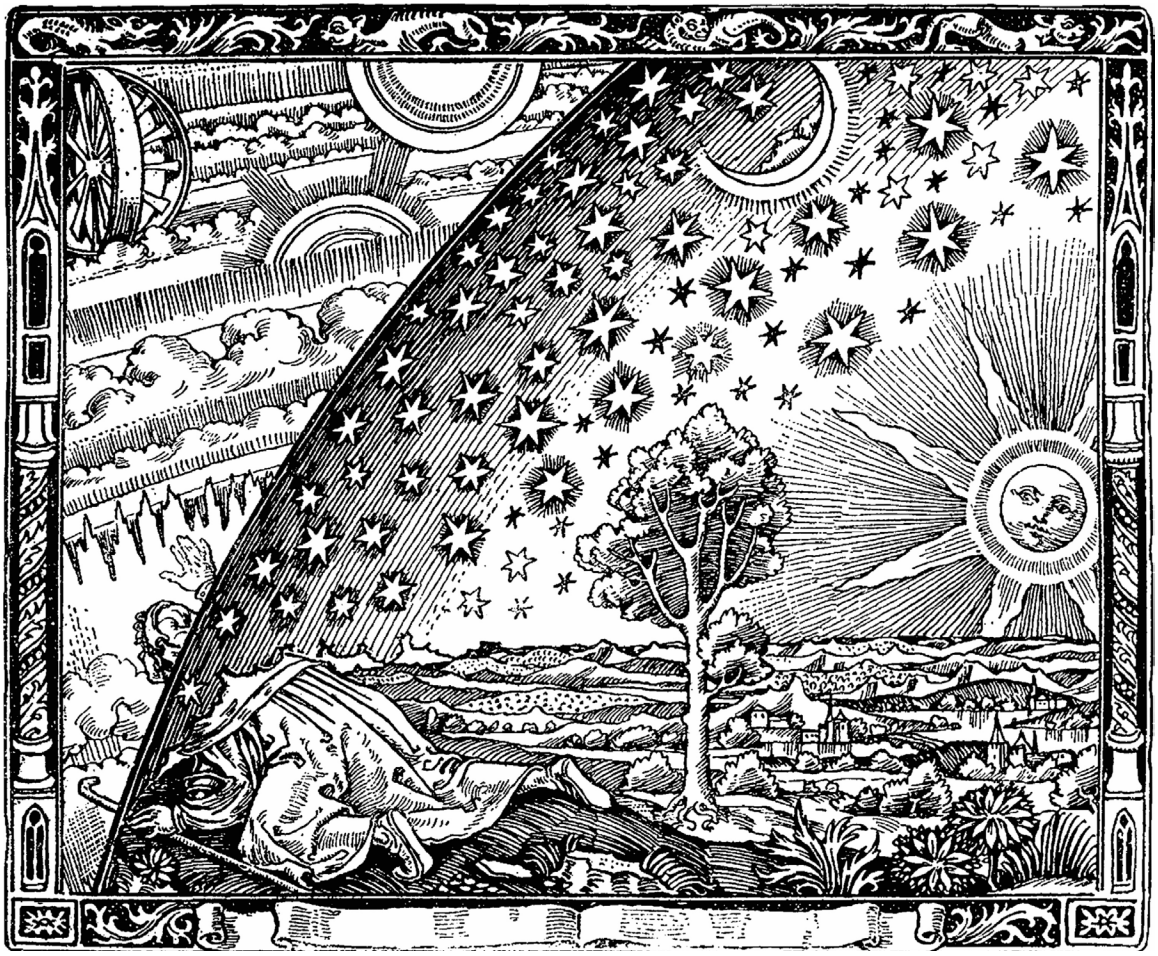


Fig 4 - 'A pilgrim of the Middle Ages tells how he found the place where earth and sky touch.' Flammarion, c. 1880.



In pre-revolutionary France, a Catholic priest would have been at home on the luxurious side; at the same date in England, he would have been hunched in a priest hole. It is a continuation of the traditional English arrangement that we find at the Tate. Of course there is no actual priest in residence today; the multifaith room is a place of a crossed-out god, so to speak.

All the same, to use a spiritual metaphor, multifaith rooms are thin places. To put your head around the white door at the Tate is to be like the traveller in the Flammarion engraving who pokes his head through the sub-lunary sphere to look upon the apparatus of heaven. What he sees is like the backstage machinery in a theatre. [Fig 4] Similarly, at the Tate you realize that the galleries are only a plaster, set behind which are services, pipes and lifts, along with another stage where a different play is being performed. With their emptiness, leafless trees and shoes, multifaith spaces resemble the set of Waiting for Godot. Beckett's written directions give us only this: 'A country road. A tree. Evening.' Later on, a mound, a few leaves and boots are mentioned. Out of these hints, designer Peter Snow created a set for the British premiere of 1955 that has become an icon for the play. It could also be a picture of a multifaith room. Is it not odd that his decor is now being mass-produced in public buildings across the country, in much the same way that coffee chains stamp out local cafes?

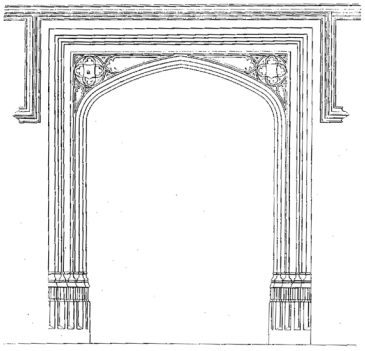
What does it all mean? One way to understand multifaith spaces might be to ask how you would dress to visit one. James Laver's famous book Style in Costume shows how clothes and interiors have matched each other through the ages.[3] [Fig 5]

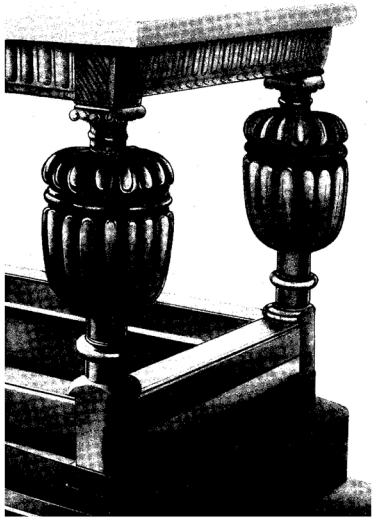
I suggest that when it comes to multifaith, the link between dress and buildings has been broken. People who use these places carry their environment with them in the form of clothes, phones, accessories and tattoos. Culturally, they identify themselves in portable ways, so what was once shared between clothes and interiors has moved entirely on to personal belongings. The room itself is like a no-man's-

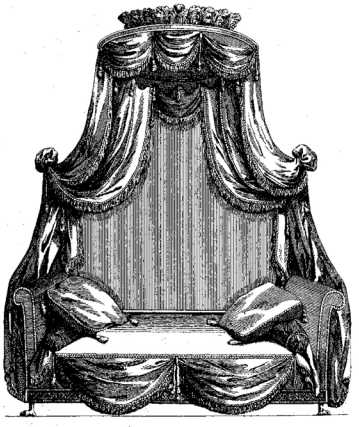
land where soldiers in different dress appear. Multifaith spaces are descended from spaces like closets that were associated with lavatories and wardrobes where you changed your clothes. Does this make them unfit for worship? This is a delicate point. Many people find it odd that something so utterly inartistic, erected by a godless bureaucrat, can be holy. These iconoclasts might say that if something is manufactured it cannot be divine. Iconophiles on the other hand, reply, yes, of course divinities can be made, and that is exactly why they are real. They find nothing wrong declaring something manufactured to be holy. These viewpoints are more or less irreconcilable with the result that multi-faith spaces are controversial, mixed-up places that it is best not to mention. If you try to rehabilitate them by compromising between these extremes, then there are unintended consequences, because it undermines the separation between nature and society upon which modernism is based. As Bruno Latour explains, modernity exists in a space created by separating nature and society that must not be allowed to contaminate each other. Things that do mix them he calls 'quasi-objects,' a name borrowed from philosopher Michel Serres, who illustrates the idea with a football. A player who has the ball is in possession, but is also possessed by it, so that the ball and player move in unison, and both seem to share a purpose. To maintain our modern world, we must hide and ignore quasi-objects, and insofar as the world is full of them, he goes as far as to say that we have never been modern.[4]

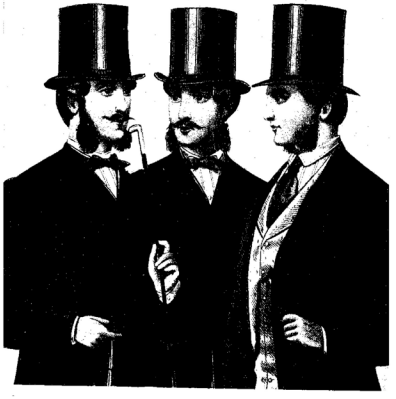
Visitors treat multifaith spaces as a church, or a mosque, or any other place of prayer as they please. The room and its user have a reciprocal relationship, like that between a footballer and their ball in which the subject-object relationship is undermined. A multifaith space is bland for the same reason that a football is round—in order to be predictable and fair. Multifaith spaces can thus be seen as non-modern quasi-objects that allow different worlds: secular, commercial, and religious, to coexist without having to reconcile their differences. This works in much the same way that Blondel's Ancien Régime passages helped create and sustain

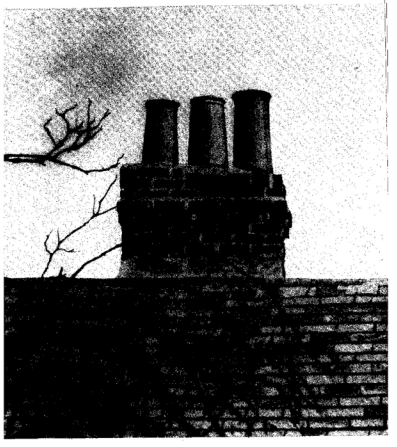
Fig 5 - Parallels between clothes and architectural styles (Laver 1949).











the two worlds they linked. To pass from one side to the other unnoticed, you would have had to change your clothes and your manners that preserved the separation between the classes as if it were a natural fact. In a similar way, today people of different dress and beliefs timeshare plasterboard cells in airports that allow them to live together without friction. Bland multifaith spaces like the one at the Tate are now common. I estimate that there more than two thousand of them in Britain, a figure extrapolated from how frequently they occur in types of buildings. But no one knows for sure; there is no one behind them, not even one notable person associated with them, no multifaith authority, and not even one famous multifaith space. Perhaps even to talk about a single multifaith space is misleading; better to think of them as a multiple with no beginning or end—a rhizome if ever there was one.

There is hidden life in the non-modern. Multifaith spaces spring up unannounced, and attract motley people whose behaviour is protected from scrutiny; who knows what goes on behind their doors? Likewise, if you were to step through Blondel's secret doors, you would enter mysterious poché spaces where you might find secret lovers, con-men, butlers, spies and beautiful food on trays. If you were to set a novel in a Blondel house, the plot would surely involve these passages.

Non-modern places are rich in narrative potential. One might like to know: are there other non-modern things hidden in plain sight like these service passages and places of worship?

The character of non-modern things can be sketched as follows. They have obscure origins, or some mythical origin, and then develop in ways that cannot be foreseen. They resist reductive explanation, and in particular do not belong to some rational scheme of modernism. They are found at edges, where they can be overlooked, or in some other way absent. They are interfaces where odd streams of life cross and carry on in secret. They have multiplicity in unity. They can be thought of as elementals, non-human agencies with which

we share our world that reflexively affect human actions.[5] Examples of the non-modern in the built environment would include Little Sparta, Ian Hamilton Finlay's garden on the edge of a moor by that contains his collection of laconic concrete poems. The Cenotaph is another. The original was a temporary structure positioned in Whitehall, London, to let crowds pass by on both sides. It took root where it stood before spreading, and there are now more than fifty versions of it in other places. Examples of unconscious interactive design arise in engineering, such the sinister overflows at Ladybower Reservoir near Sheffield, which are some of the most powerful stone forms you will ever see; yet their designers did not realise what they had made. Gasholders, especially early ones like temples, are also deeply, and accidentally, meaningful.[6] All these things are anachronistic and interactive; in anthropological terms, fetishes.

This having a life of their own is a problem for designers, precisely because you cannot just sit down and create a fetish, at least not in the way that design is usually taught. There has to be some sort of an accidental element in their creation, as the examples given above show. Perhaps all the designer can do is respond at the right moment to something that shows signs of life. You can see this happening at the Tate, where the way you encounter the prayer room makes you pause to wonder if it might actually be an interactive artwork. This is both witty and insightful, and this presentation is itself a fine piece of design. It makes a nod to the way things are going, for while the origins of these places might lie in airport and hospital chapels, the direction multifaith has taken has left them far behind and crossed into deeper waters.

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Author biography

Andrew Crompton is an architect and researcher at Liverpool School of Architecture. He is keenly interested in interface design and has visited about 250 multifaith spaces since 2010.

The Future (of Interiors) is Queer

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Abstract

The history of the interior is queer, but the future must be more so. Queering the interior means living differently within interiors, as well as doing interiors differently, as well as making interiors that accommodate different kinds of people and different family types. This chapter, in memoirist mode, represents my personal and political reflection on the domestic interior as a space of and for queer families, and the interior as a space for embracing otherness.

DAVIS JONES 2013
True
I love you
Come
to
I hope you have
HOW TO IMPROVE the COMPLEXION
PEARS SOAP
HOW COME ALL THE COOL GIRLS ARE LESBIANS?
Pears
Soap
2 SISTERS

Fig 1 - In the interior of the interior, the family reflects itself back to itself: the author's fridge.

A provocation: the future of interiors must be queer. I don't mean in the sense of the identity category, or the sexual orientation—the last letter of the smorgasbord that is LGBTIQ – or at least I don't solely mean that.[1] Rather I'm using it here it as a verb: to queer; a process or practice, a performance or stance, a mode of being or acting in the world and in interior space.[2] Queering is a means of looking critically askance, knowingly subverting conventions and norms of all kinds (sexual, gendered, disciplinary, social, spatial, familial), of resisting and doing things differently and in a way that values difference: including in the design of interiors, and the process of living in them. Domestic interiors, in particular, are especially ripe to be queered; as the most habituated, taken-for-granted, most normative interiors of all, they are more ready than ever to be brushed against the grain.

Of course, there have long been queer interiors.[3] Some of the tropes are well worn: the gay bar, the 'bachelor pad,' the lesbian salon, the feminist bookshop, the S&M dungeon, the drag revue, the university 'women's room'. Such closely identified and often segregated spaces have often been highly gender-marked, often also sexualised.[4] They have also been crucial to the development of queer civil rights, social movements, and culture per se, and have often been understood in terms of their urban geographies.[5] They are the 'other' spaces we needed, and still need, even as they become more diffused, migrate online, and become increasingly indistinguishable from the spaces of the mainstream.

But what interests me here is not so much the past and present queer spaces of the public domain, but a new kind of private realm, one that is not conditioned by sex (or at least not entirely) but is rather a space of the everyday, the domestic, and most particularly the space of the family. Naturally, we queers have always had our domestic spaces—closets and all—just as we have always had families.[6] But truly queering the domestic interior would mean more than décor: more than celebrating our rainbow geegaws and tasteful nude photographs, our novelty

fridge magnets. It could be more ambitious than that—both higher and deeper, bringing forth the alterity in and of the interior. This would be a process (a conceptual one and a practical, spatial one) of making spaces for queers, and for queer habitus, but also of queering domesticity itself. Others have already compellingly discussed this possibility.[7] But my particular interest here relates to rethinking the concept, and accommodation, of queer families.[8]

Allow me to take myself as an object of study. At present, my house—my interiors—force me (unwillingly) to be normal. This is perhaps as much a function of administrative oversight as it is the rooms themselves, their partitioning and arrangement and furnishing and appointment. The landlord obliges me to be normal, as does the plumber, the electricity provider, the insurance company and the local government rubbish-collection regime. But the interior itself also has a normalising effect: only two rooms that can really serve for sleeping, the whole not big enough for more than one family, the affordances and possibilities of the interior curtailed by rooms, corridor, untouchable walls. But even if my house is normalising, I myself am not normal; nor have I ever been, nor have I wanted to be. I have not wanted to live in a conventional pattern of dwelling or occupation; but given that I have a partner, and more particularly a son, and we live in a city with an astonishingly high cost of housing and we are obliged to rent a house, then we are also obliged to conform to our house, and it in turn normalises us: makes us into a self-contained, isolated, nuclear family.

This is not how I want to live. We are a nucleus, yes, but we are atomised, and we'd rather be part of a molecule. What if there was some way in which the structure of our unique, carefully chosen, hard-won family might be reflected in our house, in our interiors? I'm not just talking about the immediate unit: two women in a romantic relationship, raising their child together. I'm talking also about the friends whom we have taken into our family, whom we might want to live close to, so close that their interiors

overlapped with ours, so that we might share some spaces (the kitchen maybe, definitely the garden, possibly not the bathroom), to share some tasks (child minding, cooking, convivial interactions), and to share some possessions (car, cat and vacuum cleaner). I'm talking about the people we love, and have chosen to form kinship relationships with, rather than being obliged by an accident of biology.

In considering the future of interiors, then, the question might be: what happens to domestic space when some of us set out to queer the family, to invent our own unique kinship groups with whom we choose to live in varying degrees of intimacy, proximity, and detachment? Or, conversely, what happens when our family types, our queer domestic arrangements, are not accommodated or afforded by the spaces we find ourselves living (disorientated) within?

In any conversation about families and their spaces, the figure of the child looms. The realm of the homosexual was once the realm of the non-procreative. To have sex without the hope or expectation of children meant the embrace of unproductive pleasure, and was itself a subversive act.[9] But now, across the Western world, we queers are having children, quite deliberately, and at a previously unseen rate and scale.[10] There's a veritable boom of little rainbow babies out there. And while some parents will be content to settle down in the suburbs and become an (almost) conventional family (almost) like any other – two parents, some kids, a dog, a back yard – others shun the spectre of the hetero-normative.[11] And it is these queers, amongst whom I count myself, who want to continue with the processes of reinvention.

Here I'm thinking of all the other (singular, exceptional) models of queer family that I personally know—different from my own in many ways, but with the commonality that we all depart from the convention.[12] I can think of one family where two mothers and a father all live together, semi-detached, under the same roof. One where a single mother who conceived her son using donor sperm lives in close proximity

with her own mother. Where a lesbian couple lives most of the time with their children but periodically vacate the house for their donor, who lives across the other side of the world, but comes to be with the children for one week out of every six. And so it goes on: the family where a biological father has transitioned and now lives as a woman, the families where the gay dads foster three children, and of course the queer families where there are no children at all, but a gaggle of friends, lovers, biological family members, visitors, housemates, all living in various combinations in one another's spaces. All of these families are, to varying degrees, ill-served by their current dwellings, and obliged to accommodate, to manage: to normalise. In my own case, we have a whole donor family, not just a singular donor man. I wonder what would happen if there was ever a time when they moved from afar and came to live close – what if our son could pass through a door, or perhaps just a doorway, perhaps simply cross a space, to spend time with his half-siblings, his biological father, and the wife of his biological father: a crucial figure in this arrangement, for whose role there is not even a name? What about our own mothers, who may one day need to be closer: not too close, but closer, and certainly closer than current arrangements allow. If it takes a village to raise a child, then I want my village to be a queer one, in the broadest sense.

None of these are, of course, new ideas. From pre-historic times, through all eras of human history and habitation up until the present day, there has been a continuous thread of communal living, along with the dwellings and interiors that accommodated it. It was only the modern period, with its shining ideals of health and hygiene, cleanliness and whiteness, its slum clearance, its fear of over-crowding, its reform of the working classes towards health and moral rectitude, which divided and separated domestic life into distinct dwellings and rooms with distinct purposes and restricted occupants, where there should be sufficient, distinct bedrooms to allow parents to sleep separately from children, female children to be separated from male. It was only in the modern period that forms

of communal life came to seem suspect, or slovenly, or wrong.[13]

Even then, various countercultures held out – with their pre- and post-hippie communes and co-operatives and collectives, their intentional communities and alternative forms of new utopia, with varying degrees of bucolic agrarianism. Even today, the same general ideas return in a new form: the sharing economy, and the ideals of multi-generational living as exemplified in the 'granny flat.' But the general rule now, in the modern Western world, is that only one family will occupy a given dwelling, and this immediate, biological, nuclear family unit will live in isolation from their friends and larger families, and more importantly from the families that they might choose.

I say: it doesn't have to be this way. I say: interior designers have a role to play in undoing, rethinking, in *queering* the conventions of housing and interiors.

The future they might make is one where queer families – in the very fullest sense of that term – can flourish, and be embraced, by new housing types. Such interiors are flexible, open to various and changing uses and users of space. They are comfortable, and comforting, and homely – but not conventional. They offer spatial affordances and possibilities rather than reform and control. They rethink the ways in which the distinct (conventional, ossified) names and types of room map onto specific domestic activities. Does the hand basin really need to be in the bathroom, or could it be in the hallway? Does the shower really need to be indoors? Are there different ways that (aural and visual) privacy could be managed in sleeping areas, without necessarily dividing into cellular rooms? There will be spatial efficiency and overlap, and a high degree of amiable communality, but seclusion and separation will always be possible, and protected. Such interiors are built well, from sustainable materials, intended for a long duration of fulsome, common use. They become worn, but are maintainable and well maintained, and they last. They are simple and

enduring and well used, and their aesthetic derives from this.

In their representational quality, these interiors both express and envelop queer affiliation, in all its kaleidoscopic forms, its dimensions and nuances of emotional, amorous, poly-amorous, platonic attachment, its very queerness in the sense of its strangeness, its one-off, unique, tailored specificity to a group of people and the intentional family they have formed. Naturally, these interiors are not only domestic: they are also the public and civic spaces, grand interiors and urban rooms, community spaces and local cafes, all of which express and affirm a diverse culture back to itself. But the domestic is where these interiors find their most intimate and affective form: the spaces in which people celebrate all the grand themes and trivial moments, the quiet annoyances and great joys, to which all families are party. Such interiors make the space for queer lives to take place.

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Author biography

Naomi Stead is Professor of Architecture and Head of the Department of Architecture at Monash University, Australia, and an Adjunct Professor in the School of Architecture at the University of Queensland. Her research interests lie broadly in the cultural study of architecture: in its cultures of production, reproduction, mediation, and reception. She edited the book *Semi-detached: Writing, representation and criticism in architecture* (Uro, Melbourne, 2012), and was from 2011-2014 co-editor of Architectural Theory Review. She is widely published as an architecture critic, and is currently a columnist for Places Journal.

The interior of the future will be mediated. Conventionally, this has referred to the screen, but digital technologies are now seeping into our things, walls, and the very air around us. As well as taking new forms, technology takes on new agency, coming to life in ways both recognisable and absurdly unpredictable. Interior space becomes both a mediator between ourselves and remote others (human and not), as well as mediated by the things placed inside it, connecting with our own mental and social interiorities—emotional, cognitive, biophysical—linking past, present and future. What is a home that becomes a museum, or a hotel, that we observe online or inhabit in person?

Interior Futures Mediated

The Past in the Future Interior

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Abstract

In 2010 Rem Koolhaas observed that while the 'empire of conservation' was greater than it had ever been, its purpose was becoming more and more opaque. There's a part of me that doesn't care: I love historic interiors: period rooms, reserved behind red ropes, Pharaoh-esque furnishings, with tables laid for meals that will never be eaten are stilled in time. But they are weird: stuffed with antiques, period rooms are modern phenomena no more than a century-and-a-half old, and in another 150 years our descendants will find them as odd as the tomb of King Tut. How, if they still exist at all, will the interiors of the past be experienced in the future? And, remembering that by then, we will ourselves be the past, what will happen to the interiors we have ourselves created? This is a speculation about a museum which does not yet exist, although its exhibits already surround us. In 2010, Koolhaas asked what the past was for. In this chapter I propose to extend the question and ask, What the past be for, and how will we experience it, in the future?

Fig 1 - The Classic Period Room: dining room in the House of Henrik Ibsen, Oslo (Photograph by author, 2016).

In 1949, John Summerson concluded his book *Heavenly Mansions* with a chapter that shares a title with this essay.[1] He was talking about architectural conservation; but in this chapter, I hope to reflect similarly on a future for interiors past.

It's not quite the same issue, for while buildings may have been built to last, interiors have not. One cannot imagine beginning this essay, as Summerson did, with a walk around a provincial town, with its centuries of architectural accretion.

But one has to start somewhere. Like Summerson, who was curator of the house-museum of the Georgian architect Sir John Soane (whose house is preserved as it was when it was when he died), I love period rooms. I love the red rope that stops me going in, the pine cones placed on chairs to make them impossible to sit in, the tables set for meals that never were and never will be eaten. Such rooms are reflections on and relics of the past; but they also embody assumptions about interiors present and future, too. Firstly, we assume that the objects gathered in such a room are precious and that, as Summerson notes of historic buildings, their value might reside in craftsmanship, aesthetic éclat, or association with a person, event, or place. Secondly, we assume that these objects belong together as an ensemble, and are more than the sum of their parts.

And in believing that both objects and arrangements make an interior for us to conserve and observe, we also believe, as writers from Mario Praz[2] (1949) to Beatriz Colomina[3] (1994) to Charles Rice[4] (2007) have noted, that an interior is not just an inhabited place, but also an image—a work of art—whose preservation is a worthwhile occupation, analogous to the preservation of any other work of art.

And therein lies the rub, for a conserved image of a room is not the same as a room that is lived in. Instead of inviting us in, the period room offers layers of alienation, from the red

Fig 2 - My Brother Leo Hollis in Matt Collishaw's Thresholds London: Somerset House, 2017 (Photograph by author).

rope to the pine cones. We file past, confined to one side of a room, and what we encounter is like a theatre set, or a room glimpsed in a photograph posted on social media—a room with the 'fourth wall' removed. Other than the occasional glimpse in a mirror, we—the current occupants of the room—are invisible.

In order for us to be able to 'see' these rooms as interiors, they have been removed from the sphere of the occupied world. This makes the historic interior quite different to the historic building, which, as Summerson would have noted as he wandered round his provincial town in the 1960's, can be both preserved and inhabited at the same time.

Burdened by its own traditions, bound up in paradox, the period room, past and present, is also under new pressures.

Once upon a time, the interior—the space-as-image—was the exception to a general rule of rooms that, in a more ad hoc way, were lived in unobserved. Now, almost every room will have been photographed and shared on social media: the images taken from a multiplicity of angles and shared online, infinitely. The currency of the interior-as-image has been irreparably devalued through ubiquity.

And the interior has lost its autonomy. Rooms are now, thanks to the bewildering array of services that lace their interstices—from data to air, light, heat, water, telephony, and electricity—nodes on networks rather than the self-sufficient retreats from the public world that they were traditionally imagined to be.

As a result, interiors are now a great deal more than the sum of their tangible physical parts. When everywhere has wi-fi, everywhere is inhabited invisibly by augmented doubles of itself: on Wikipedia, travel guides, Google, Instagram, and more. And immersive technologies are increasingly able to replicate 'real' places and spaces: spaces occupied by apparently real people now exist in the purely virtual world. In online games, in greenscreen news studios, the prophecies of the incident

room in Spielberg's *Minority Report* have been turned into commonplaces. Finally, our encounters with the interior have been challenged by a philosophical shift. We no longer believe, as our enlightened ancestors did, that there is a 'real' world out there, passively waiting for our minds to observe it (the visitor to the museum, standing at the red rope). Quantum theory, Foucault, deconstruction and Deleuze have moved us to a more entangled notion of looking, in which subject and the object form one another in the act of looking and being looked at.

How, then, can the relationship between historic interiors and the people who come to see them be reimagined? What happens to the 'period room' when the interior looks back? In order to speculate on the question, I shall discuss three recent approaches to the 'period room'.

Matt Collishaw's *Thresholds* ostensibly reconstructs the room in which, in 1839, the photographer Henry Fox Talbot first exhibited his photographs to the public. The room is

long gone, and Collishaw has reconstructed it as a digital model, experienced through a VR headset. Digital mice run across the floor, and even the fire emits a warm glow.

So far, so Black Mirror.

But while you're waiting to put your headset on, you look through a window at a white room in which visitors shuffle, burdened with cumbersome VR gear. Look around the edges of the window, and you'll see that this white room has been built inside another, much older one—part of the original architecture of Somerset House.

On the way out, visitors don't mention Fox Talbot's work. Instead, we're talking about the VR—most importantly, how it doesn't quite convince. It's not, after all, the naturalism of this work that makes it art, or an interior: it's the artifice. Virtual reality isn't virtual unless it reveals within itself clues of its own unreality.

Fig 3 - In the salon of the Dauphin, Versailles and the Mobilier National Versailles, 2011 (Photograph by author).

Versailles and the Mobilier National sounded like a conventional period room exhibition. It returned pieces of furniture removed from Versailles in the French Revolution to their original places in a palace which famously became uninhabitable at 10 A.M. on the 5th of October, 1789. To this day, the clocks are stopped, and as far as possible, the interiors preserved at that moment. This was a step in its restoration.

So far, so Soane.

But this exhibition also imagined that the head of the French state still lived at Versailles; and the ancien regime furniture had been shifted around to accommodate other pieces, made for Mitterand, Sarkozy and Pompidou, by designers including the Bouroullec brothers and Philippe Starck.

The effect was, if visually awkward, conceptually dizzying, conjuring up a world that had both never happened (the political scenario), in media that were absolutely real (the furniture). The antique dealers I was with hated the indecorous mashup. I loved it: disrupted, the arbitrary artifice of the preservation of Versailles was exposed. Hinterland, staged in 2016, was both lunatic and simple: as the sun set, thousands walked into woods near Glasgow, to visit St Peter's Seminary, a 1960's Brutalist masterpiece abandoned in the 1980s and now a ruin. To music and light composed for the occasion, we wandered about the building, recalling what we knew of its past.

So far, so Son et Lumiere

Our route into the chapel followed the ramp once trod by priest and altar party, and upon entering, we found ourselves on the steps of the altar, looking out into the darkness, to the nave where once the congregation gathered.

And there they were, moving in the shadows.

Fig 4 - NVA Hinterland St Peter's Seminary, Kilmahew, 2016 (Photograph by author).

It was only later on in the tour that we realized who they were. Standing in what had once been the nave, we looked back towards the altar, and saw, lined up in silhouette, what appeared to be a party of priests and acolytes. In fact, they were who we had been minutes before. We were the people they were going to become in a few minutes' time.

Threshholds used digital technology to create the double of a lost interior. Whereas the Versailles and the Mobilier National used real furniture and interiors to disrupt relations between time and place, Hinterland used even less: a route, and the darkness of evening, to confront visitors with their own imaginings of the past.

But all three explore and expose the artifice of the period room. Gaps between the present and the past, watcher and watched, are not healed but dramatized, and the idea of the interior as a place of irrecoverable temporal and temporary occupation is exposed.

Technology will come and go. Historic interiors will disappear, and others will become historic. What we are left with are the relationships we form with them: how they are structured, constructed, imagined, and shared. For too long, the interior has been an image rather than a place to be lived in. We can use its image-making power to explore the artifice of image making, and, once more, make rooms, like the historic provincial town Sir John Summerson wandered to ponder the Past in the Future in 1949: places to be lived in as well as images to be looked at.

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Author biography

Edward Hollis studied Architecture at Cambridge and Edinburgh Universities, and practiced as an architect in Sri Lanka and Edinburgh. In 1999, Hollis began lecturing in Interior Architecture at Napier University, Edinburgh. In 2004, he moved to Edinburgh College of Art, where he is now Professor of Interior Design. His research focuses on the junction of building re-use, narrative, and time. His books include *The Secret Lives of Buildings* (2009), *The Memory Palace: A Book of Lost Interiors* (2013), and *How to Make a Home* (2016).

The Blockchain

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Abstract

The future of interior design will see the existing networks and communication of device-based technology be transferred to the interior itself. Spaces become a unified and collective entity, with machine-driven qualities. The blockchain becomes a key agent in these interiors, allowing peer collaboration, verification of information, and secure data storage.

Fig 1 - Interior space as machine with augmentation.

As the shift from inanimate to interface increases, crossing from devices to spaces, user interaction with the intangible is now considered part of interior design. With the advent of more immersive technologies, the usual definition of an interior space through boundaries and relationships with the physical is being redefined. The interior of the future will consist of a network of programmed and adaptive spaces. Material entities such as walls and furniture will still exist, but the interior space will belong to a network rather than an individual space, like a collection of multiple realities that exists in an archive or exhibition.

The interior will allow feeds of information to be presented within the fabric of the space. Objects and structures, from walls to coffee tables, will act as a backdrop for these feeds. And much like devices, the interior as a whole will act as a front-end for user information. With this immersion, and the shift from device to space, interiors will act as a computer and thereby utilise concepts of computer architecture. [Fig 1] In this way, future interiors will have a data storage capacity much like the RAM on a computer: All necessary data is stored and accessed when needed by either user or interior. The issue, then, is who will control and store this data. With interiors set to become vessels for this valuable commodity, competition for control and access to this data will be fierce, and whoever has this will have much to gain. Future interior spaces will therefore be subject to issues surrounding the concept of big data and media more broadly.

We often consider interiors—particularly domestic spaces—to be a reflection of self. However, what we consider a reflection is actually an extrapolated and filtered version of our perception of self; a curated representation that we wish to project. Just as social media allow us to do the same, the future interior will act as an avatar in a different model of social network. Data and personal information will be exchanged and transmitted both from person to interior, and from interior to person. Within such an extension of the technological self, when entering through a threshold (such as the

Fig 2 - Diagram of blockchain.

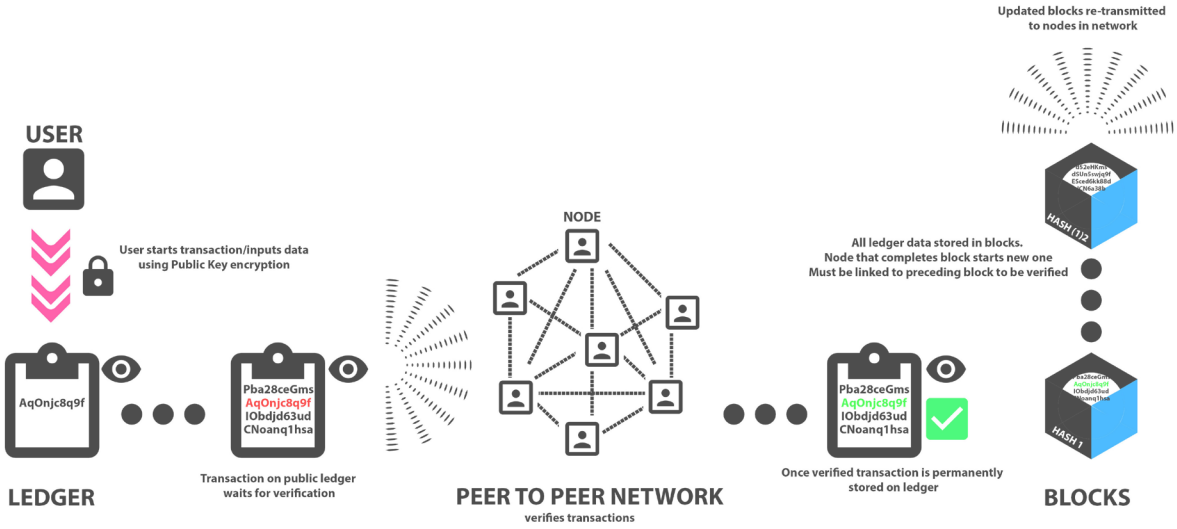
front door), the inhabitant will be recognised by the network. Individual preferences will then be loaded from the interior's memory and usual behaviours (such as making a drink) will be facilitated by the interior based on previous data logs.

Enter the Blockchain

With the collective nature of future spaces, the blockchain becomes a vital concept in the future of interior design. The blockchain is, in essence, a method of recording information securely, and verifying data transfers via a peer network. In this sense, the blockchain is a catalyst for the future interior as mediator between network and user. The blockchain provides safety in numbers, retaining the idea of the interior as a sanctuary, and providing truth and control through peer validation. In the words of Ralph Chaplin, "what force on earth is weaker than the feeble strength of one"?

The technology of the blockchain was created by the pseudonymous 'Satoshi Nakamoto' in 2008 as an experiment in computation and trust. It is comprised of recorded transactions and events stored across a peer-controlled, public network. [Fig 2] This network is made up of ordinary people; anyone can download the software onto a device and become a 'node'. Nodes act as workers in the chain—they record and carry out transactions and validate information. Once part of the network, each peer or node has a complete copy of the blockchain. This means everyone can view the entire history of transactions, as part of the public network.

All validated information and transactions are stored in 'blocks' on the chain. In order to be verified and become part of the chain, the information in one block must link to the preceding one, like a paper chain. If it cannot, the information is considered invalid and is not added. The blockchain is therefore often described as a historical ledger, as it stores all information regarding transactions in chronological order. Indeed, the starting point of a blockchain is known as the genesis block. The blocks are periodically updated with the


Updated blocks re-transmitted
to nodes in network
USER
User starts transaction/inputs data
using Public Key encryption
AqOnjc8q9f
Pba28ceGms
AqOnjc8q9f
lObdjd63ud
CNoanq1hsa
Transaction on public ledger
waits for verification
LEDGER
NODE
PEER TO PEER NETWORK
verifies transactions
Pba28ceGms
AqOnjc8q9f
lObdjd63ud
CNoanq1hsa
Once verified transaction is permanently
stored on ledger
All ledger data stored in blocks.
Node that completes block starts new one
Must be linked to preceding block to be verified
HASH (1)2
HASH 1
BLOCKS

latest transactions and information, and once verified, this is re-transmitted to all those in the network. For this reason, it is often described as unmodifiable: if anyone tries to alter any data on the chain, all nodes will be aware.

Nodes verify transactions and data through various methods of consensus and proof. 'Proof of work' is one example of a consensus mechanism used by blockchains. This validates transactions using digital signatures. The first signature needed is the one of the preceding block, the second is the list of new transactions, and the third is a random number, guessed using a secure hash-generating algorithm.[1] When the hash value is guessed correctly, and the other signatures and transactions are equally valid, everyone on the chain can see this extensive work, and knows the information to be true. Proof of work is used in the virtual currency Bitcoin, and is perhaps the best known method of validation. With Bitcoin, this process is known as mining, and the solver receives Bitcoin as a reward.

Transactions on the blockchain use public key cryptography, providing a high level of encryption. This involves using a random string of numbers and letters as passwords, or 'keys', to not only replace personal information, but to access the required data. Therefore, although all information is stored publicly on the network, the link back to personal data is hidden. It is an odd mixture of privacy and complete openness—not unlike the future interior.

At home with blockchain

As the future interior space is no longer an individual concept, the blockchain acts as the technology that connects all the interiors. The objects, boundaries, and people inside these spaces are also no longer singular entities. Just as devices act as nodes on the blockchain, the interior space itself will act as the equivalent, and become part of the mediation between user and network. [Fig 3] The future interior as a node becomes a worker on the chain, validating and processing information transmitted to and from the network. This includes communicating with other interiors on the network to update and

distribute information and new configurations to all entities, allowing the interior to partly design itself. Interiors that act as machines will require new design considerations with regard to energy sources, cooling, and heating. They may also may be subject to glitches and errors.

The reality or representation of certain spaces within the interior will be created and transmitted in the form of augmented, or even virtual, realities. With these more immersive feeds of information, verification and control of such collectively-run spaces will become paramount to ensuring an undistorted projected interior. Feeds of information tend to present the user with only "thin slices of information".[2] Augmented or not, the quality, and subsequent design result, of such data feeds, will become the responsibility of interior designers. With the problems of verifying information, particularly from the media, the technology of the blockchain can assure the occupant of the interior that incoming information feeds are genuine. The blockchain will allow the interior network to be managed by the users themselves through peer-to-peer authentication. This collaboration and autonomy will stop the interference of big data companies and governments in the technologies and resultant interior representations. The interior will be "powered by collective self-interests, rather than by large corporations motivated by profit."[3]

Who has the forks?

However, some interior blockchains may not be autonomously run. It is unlikely that there will be just one single blockchain responsible for all interior spaces. Companies and governments will wish to stake a claim in the future interior through propaganda, suggested content, and advertising, as well as vital access to valuable user data. Between this and the media, some collective interiors will not be controlled by peers, creating pocketed communities of varying compositions. The consensus mechanisms used by the blockchain can vary, so with each unique method of decision making and verification, the design of the interior space will vary also. As decisions are consistently made through majority rule, the results may not always

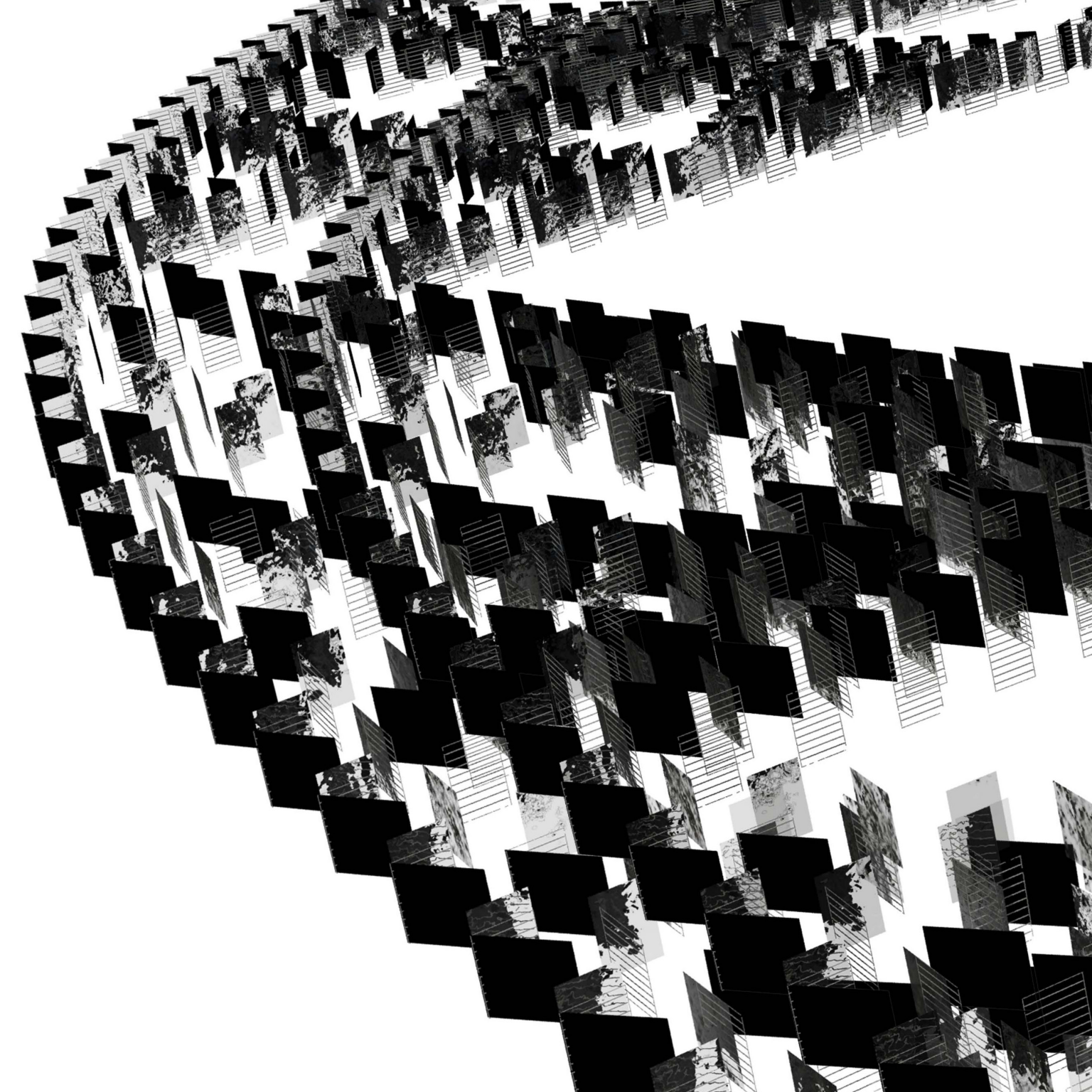


Fig 3 - Collection of interior spaces as part of the blockchain.

be in the best interest of the interior or user, or be popular with individuals not in agreement. It may also restrict the form and style of spaces.

Despite the notion of an unbreakable chain of validated information, splits in the blockchain can occur. A 'hard fork' renders previously valid blocks as invalid, and requires all the nodes in the chain to update and break away from existing verification methods. This is usually only enforced for specific reasons, such as a security update or to add a new feature, since once updated, previous nodes running the old methods, and their transactions, are no longer included or validated in the chain.[4] This would have an interesting effect on the future interior on the blockchain, since regardless of a chain run by peers or one run by big data, a hard fork will essentially make some interior spaces invalid, and exclude them from the network. These spaces will exist in exile, and although continue to work with each other, they will be forever stuck in a specific time. Surprisingly, these spaces may then have more freedom of expression, as they would no longer answer to others, except those who also split. These interiors will not be kept up to date, and will become archived designs based on past versions of events. These future interiors become past interiors.

Inhuman guests

The future interior as a machine will be able to predict behaviours and respond to demands from users, instantaneously and simultaneously. Pop up, draft, and sketch spaces will be produced as experimental spatial prototypes for users, and other areas will only be loaded from memory when needed. This will be facilitated through a large range of sensors and automated features within the interior space.[5] In addition, physical objects will have a level of sentience that enables them to communicate, anticipate, and make decisions independently. As a node, the blockchain interior will manage the demands, communication, and decision making of these sensors and objects on the collective network. In addition, these objects will be able to "reconfigure supply chains and production processes according to shared information

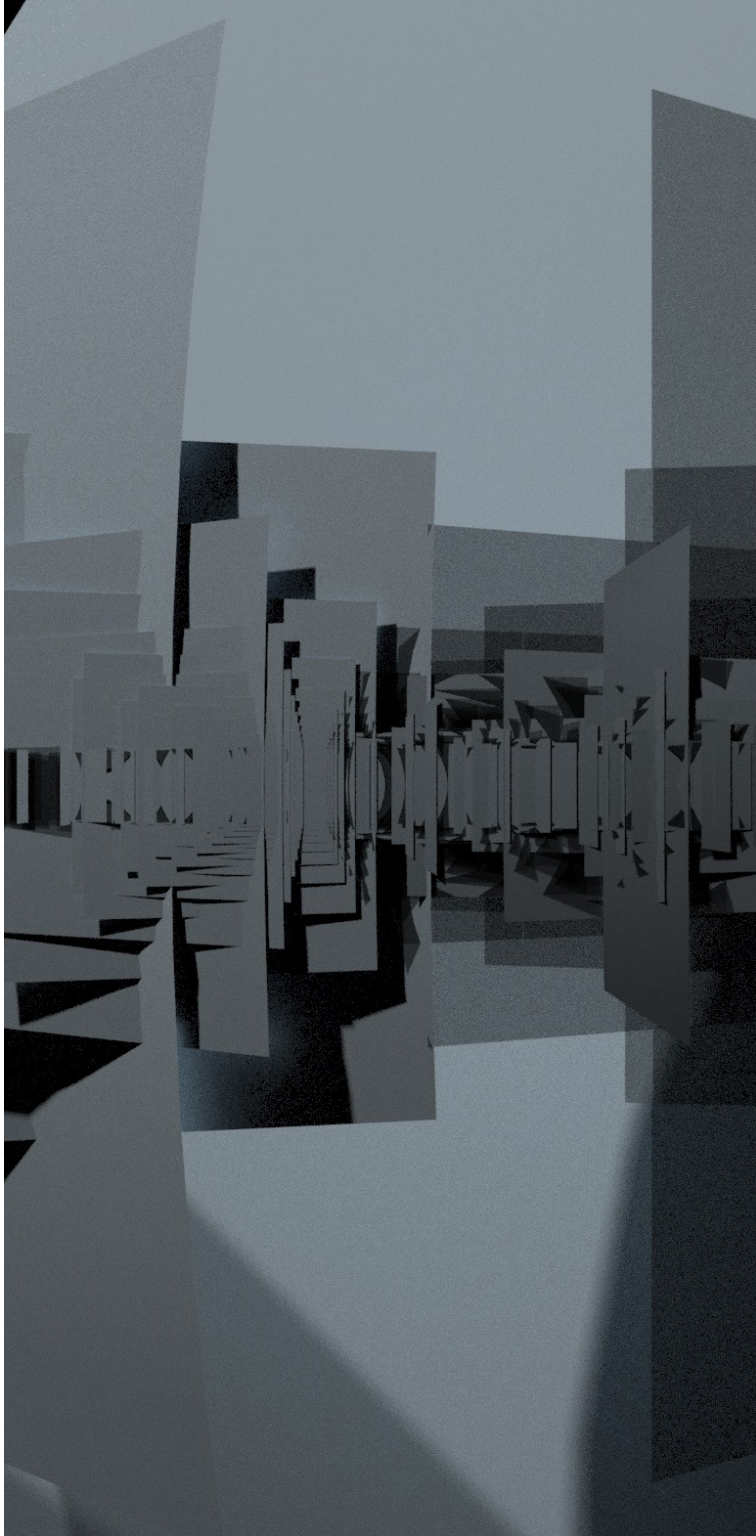
on demand and capacity."[6] Autonomously managed interiors will benefit from the ability to share resources such as power, and enable a balanced distribution of goods. However, if controlled by a third party, these resources may be managed without scruples and limited by the controlling power.

Data gleaned from the interiors and added to the network will be stored in the blocks on the chain. This includes environmental data from the objects within the interior, and also personal information regarding behaviour, interests, and even emotion. Interior and user become intrinsically linked, much like the existing relationship between device and user. The blockchain interior will save all data, unfiltered and without curation. With the responsive nature of the interior, this will impact the depiction and composition of spaces. Just as Dorian Gray's portrait absorbed the consequences of his lifestyle, the interior on the blockchain will produce 'true' representations of each occupant, raw, and hidden from view [Fig 4] As Isaac Asimov said, "Part of the inhumanity of the computer is that, once it is competently programmed and working smoothly, it is completely honest". This honest and unfiltered version of an inhabitant will sit stored on the network, a new form of representation of self, produced by the interior.

The distributed sanctuary

The interior, like the blockchain, becomes a growing list of ordered blocks of data, like a Minecraft construction. With the unmodifiable and verified nature of the blocks, this personal data is effectively stored in a digital sanctuary. This sanctuary is continuously updated, and although the latest version is presented and transmitted to the interior, all previous history is stored. It may seem contradictory to store information on a public network, but with the layers of encryption and anonymity, information can be stored securely without identity. As Richard Brown says "On the blockchain, no one knows you're a fridge". Thus, the blockchain allows interiors to act as a sanctuary still, a shelter, as is the usual definition of interior space.

Fig 4 - Imagined view of unfiltered interior data.



The technology of the blockchain becomes part of the mediation process between user and peer network in a future where interior spaces are a collective concept. In addition, it validates and updates feeds within spaces that absorb and transmit information, allows the sharing of resources, and provides a digital sanctuary. However, this can only happen in a truly autonomously run network, one without centralised control. In the future, interior designers must consider these non-tangible aspects as part of design, and become custodians of both inhabitant's data and artificially intelligence.

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The Living Room

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Abstract

Fusing aspects of the utopian and dystopian, this chapter explores the experience of a spatial intimacy wrought from a potential phase shift in our human story. Human development can be described as being a series of alterations, from hunter-gatherer to pastoralist and farmer, from farmer to industrialisation. Traditionally, these developments are viewed as being progressive; each being better than what once preceded it. A contrasting position is to see these changes as phase shifts, being simply moves in other directions rather than determinist steps of linear improvement. This chapter, the collaborative musings of an archaeologist, an artist and a designer, aims to provide an insight into such a future internal space and to consider possibilities for future interior intimacy. Part narrative, part theory, the chapter draws upon a collective knowledge of the spatial present, potential future, and the deep past.

Fig 1 - Plan.

In the far future, an excavation will be carried out on land east of the old course of the river Dernt. An existing survey of the site will yield shadows of possible structures and permission will be received to break the ground and retrieve data. Excavations will begin with a team of thirty Archaeo-Anthropologists; each will have attained Journey status.

An archaeologist, an artist, and a designer considered living rooms of the ancient past, the present, and the future. To what extent is a living room a cultural and social reflector of the society that shapes it? What cultural and social qualities might a future living room possess? How might archaeological insight help us to grasp such? How might it shape future human interactions?

The contexts of future living spaces are often portrayed as technologically progressive utopias or regressive dystopias (Colebrook 2017). However, such extremes are seldom realised. Rather, human history is defined by a series of phase shifts, into which human society folds, neither progressive nor regressive (DeLanda, 1997).

Here, we explore the living room through three interwoven threads of writing: an examination of the present, a narrative of a future living room, and speculative archaeology report of the far future. We consider the intimate nature of the future living room, locating it as a timeless condenser of the environmental and social forces that shape it (Bachelard, 1969).

From the steps, you walk through woods, past darting branches and around the swollen roots of fallen trees. As you follow the silver falls down to the footbridge and across the river, the smooth white walls of ovular buildings appear, daylight plays on the adobe surface, revealing ancient snaking cables beneath.

***

A sub ovular structure will be found NW of the site. [Fig 1] It will be a Sunken Featured two-post structure. Material finds from within the post holes will suggest that concrete pillars were

0
1
2
Key
- patches of rust/paint
- burnt clay
- aerated plastic insulation(?) material
- Concrete
- fibreglass tubing
- Sedimentary rocks

Fig 2 - Objects.

used as roof supports and polystyrene residue in combination with traces of rusted steel and pigment residue will indicate an insulated floor overlain by sheets of painted metal. A hearth composed of manufactured clay-stone, terracotta in colour, will be uncovered in the centre of the building. Finds from the vicinity of the drip gully will include fragmentary woven cables.

Capitalist society was characterised by excesses for some and limitations for many. Living rooms of the wealthy were soaked through with possessions, bloated with technology reflecting a society assuming material surplus and the pretence of limitless energy. Commodities were one-night stands, entertaining for a time then discarded in an accumulation measuring 500 millimetres of detritus across the surface of Earth, named the Anthropocene (Waters et al., 2014).

Recognising the inevitability of environmental and social collapse, the society of excess was locked into a desperate scramble to reduce its appetite for consumption: a transformation holding a dichotomy at its core, for in an effort to maintain its excesses, it demanded a polar alternative. The society of excess was unsustainable as a way of life and change became immanent.

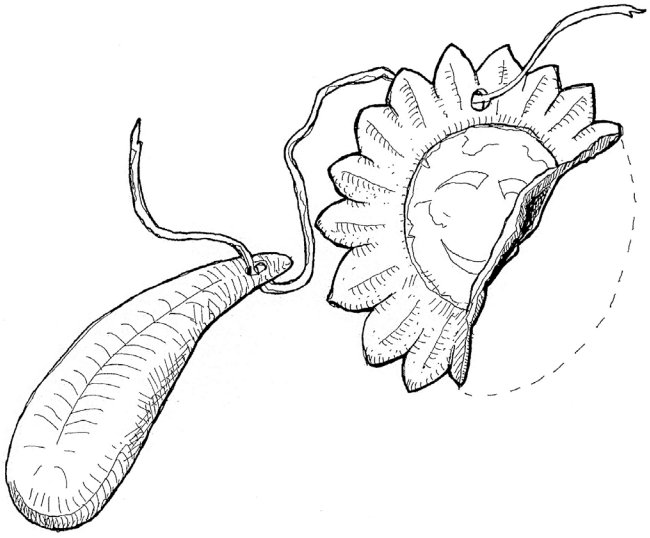
Constant in all human history was the living space, our corner of the world. Primordial to our being, it was our refuge and centre from which the circumference of our existence radiated, the zero point of human geometry. The primitive hut was the 'taproot of the function of inhabiting' (Bachelard, 1969, p. 31). The fundamental nexus of all our moments embedded on the chromosome of human memory; lights glimpsed in a nocturnal landscape, which promised the warmth of fire and refuge from the external forces that besieged us (Bachelard, 1969). Yet, our contemporary living rooms were dispersed, their inhabitants siloed, families scattered to numerous rooms, tapping on padlets, digital gaming, and smiling at cats on smartphones. Our living rooms were commodified and codified to a society transfixed with the cult

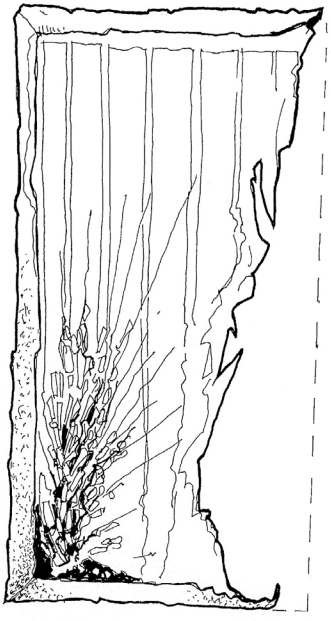
of the individual. As the world shifted, the living room became our perpetual anchor, the one constant in an ocean of change, our light on a darkened landscape.

She enters the living room plucking the remaining seeds from the yield wall. The spores are few; grey has starved the sun-catchers. Another night roasting field food will be spent around the orange light of the fire, retelling stories of the past.

***

Find 1: The stem of the stylised plastic green leaf will have a hole, through which a woven strand of thin plastic material is threaded. It will appear that the object might have been designed to hang and that it is not a deliberate deposition. It will be difficult to place this object into the 'living context' of the structure, as most of what will be known of this culture will derive from excavations such as this, where objects have become separated from their purpose and consigned to accidental burial. [Fig 2]





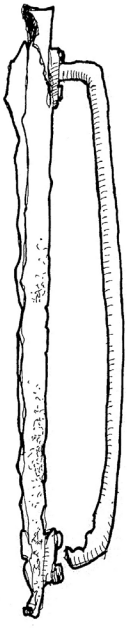


Fig 3 - Doll.

Archaeology is the study of past societies, using scientific techniques and creative imagination to extrapolate a sense of human condition before our instant. We inform the scientific analysis of excavated material culture with our knowledge of the present, weaving the threads of fact, anthropological knowledge and visualisation to create tangible landscapes, pitted and strewn with the fruit of human hands and minds.

The process of building the past has been guided by an innate understanding of stratigraphy, both physical and metaphysical. The deepest remains of the past delved from the ground and the remembrance of ancient ancestors makes for us a lodestone and compass that gives us strength and purpose and fulfils the human need to nest inside the onion-layers of space and time.

Whilst archaeology is concerned with the human past, archaeological data can be used to deduce future scenarios from past material cultures. As a discipline, it offers up a window not only to comprehend the human past, but also the human future.

If all knowledge of archaeological theory and practice were lost to humanity, it is likely that the evolution of a similar system of investigation would emerge, wrought by humanity the toolmakers, the progenitors of thought and theory to place themselves into the slipstream of time with the rudder of past narrative guiding their course.

She and her kin sit about the fire in the sunken brick pit that is furnished with soft fabrics and furs. To one side of the room, a basin for washing stands on an ancient cupboard and hanging from the ceiling a tapestry of woven plastic bags separate a further space for sleeping. One wall is adorned with plastic green leaves and the carved face of a dog, hewn from a broken timber rudder, which stirs in the light of the flames.

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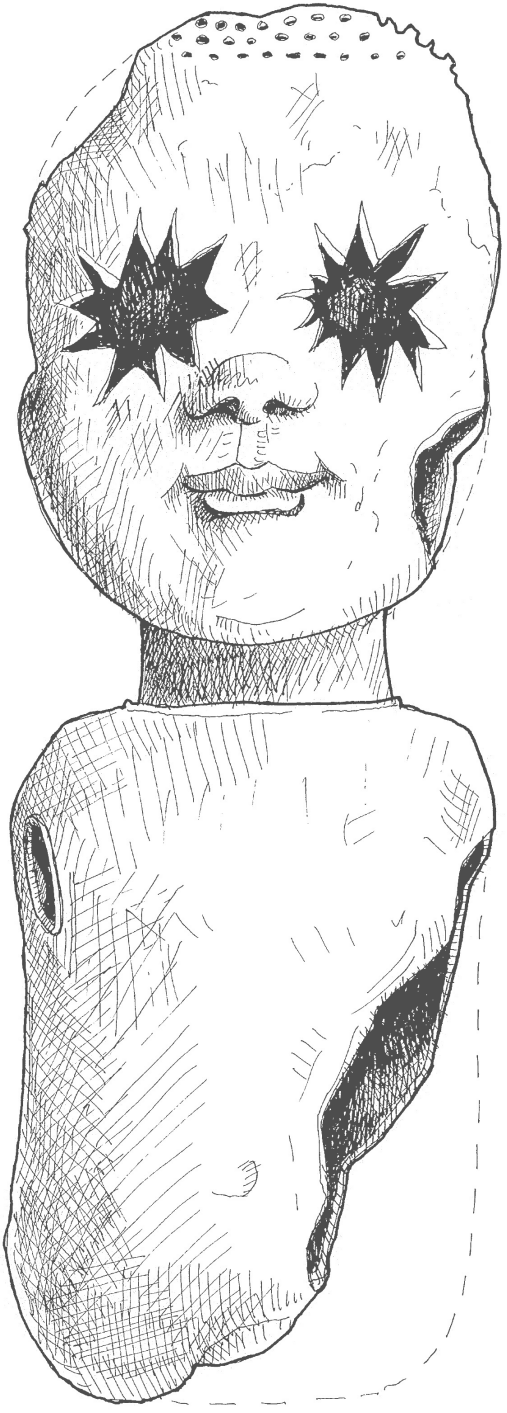
Find 2: A partial fragment of solar panel attached to a silver coloured rigid plastic handle with plastic bolts. Find 3: The torso and head of an anthropomorphic figurine, beige in

colour. This will be seen to be constructed from moulded plastic and will appear to be a female representation. The face will possess crudely moulded features and the eyes will have been punctured making star-shaped holes into the cavity of the head. It will be considered possible that something organic was placed into this cavity. Questions will remain as to whether it was a deliberate deposition. [Fig 3]

It is a misconception to imagine the future as a timeline, viewing the future as a linear progression of the past. Rather, it is an open-ended actualisation of potentialities formed by influences and circumstances acting upon it in the present (Delueze, 1994; De Landa, 1997). As such, the future can be seen as an open, non-intentional emergence influenced by the present, thereby providing a rough reckoner for framing future potentialities (De Landa, 1997; Colebridge, 2017).

As reflector of the forces that shape it, the future living room will be a Spartan experience by comparison with contemporary living spaces.



Rather than urbanised cuboid, it will be ovular, its central feature being the fire and gathering spaces for eating in groups, encircled by sleeping spaces. The creative reuse or reimaging of found objects will adorn the interior and a precious few things, pulled from the earth or found in ruins, will be venerated perhaps for their novelty or for supernatural and religious purposes.

This vision is not dystopian or utopian; our future room lies on the axis between these, a position where utopic freedoms are realised through the regression of electronic, digital and nano-technologies, yet catalyse progression in terms of human living.

Objects salvaged from the plastic mines are passed around. They are used as props to act out amusing scenes from stories told. On tiring of this, a handheld sun-catcher is passed between them to reflect light on the ceiling while they sing songs. They keep time to a pulsing shaker fashioned from a plastic dolls head filled with seeds.

***

Through these interwoven dialogues, we are conveying that the spatial entity of the living room is intimately entwined within the shifting patterns of human time: past, present, and future. The future living room will be born out of the present environmental crises, triggered by an inevitable shift in human culture and society. However, our vision is not dystopic, but rather a combination of the dystopic and utopic, one characterised by brevity of contemporary possessions, framed by the re-ignition of intimacy. A space devoid of existing technologies, littered with creativity, reuse, innovation and deeper human connectivity.

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Disrupted Display: The Future Museum Interior

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Abstract

Museum interiors 'trust but don't touch' approach has unravelled due to the onslaught of emergent innovation technologies, disruptive politics and audience diversification. Through survey and overview, this chapter examines some of the contradictions, fictions and fault lines affecting the future the museum interior. It considers the challenges and opportunities facing those tasked with responding to them and offers a framework for their effective design and curation.

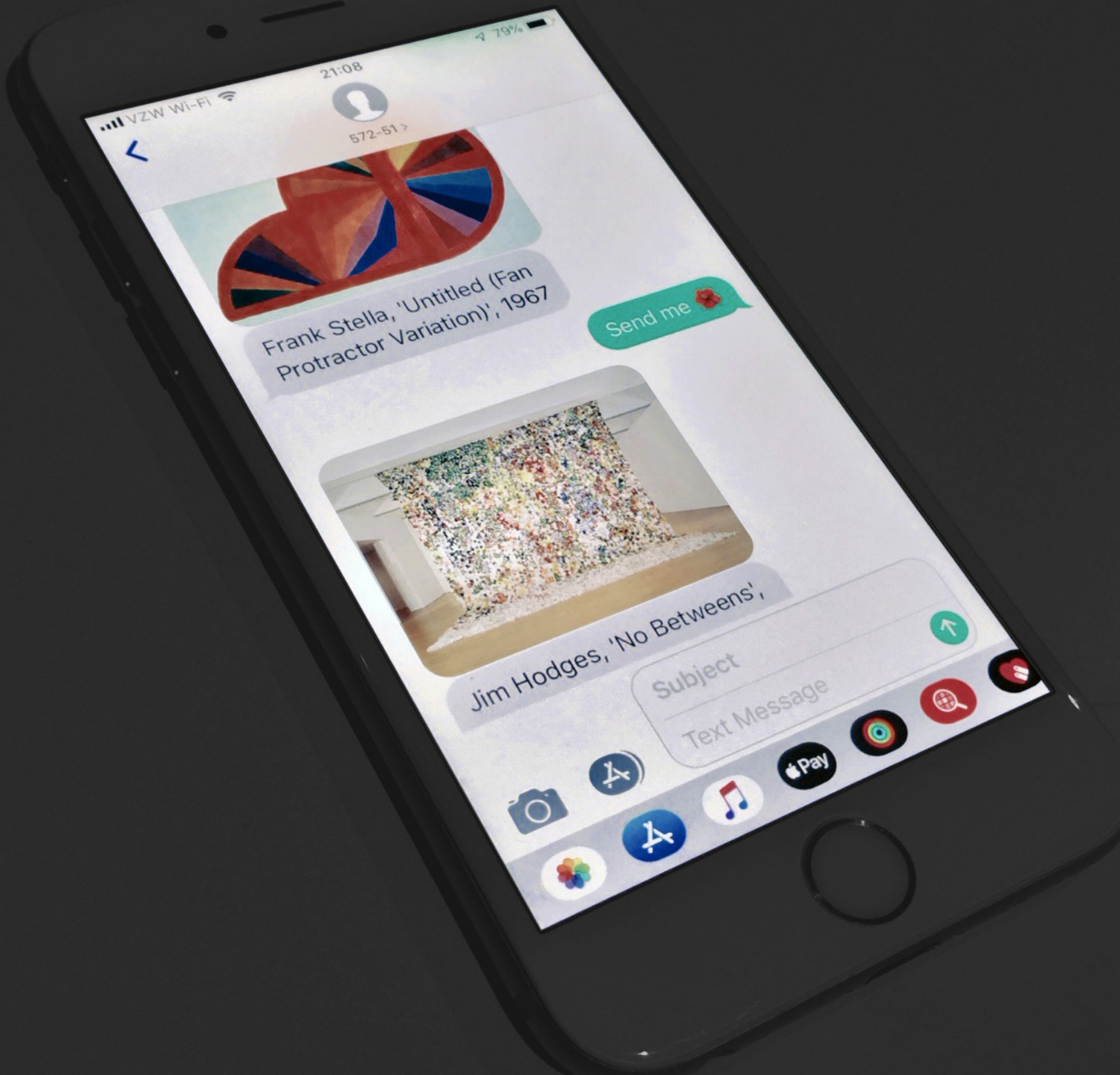

VZW Wi-Fi
21:08
79%
572-51
Frank Stella, 'Untitled (Fan Protractor Variation)', 1967
Send me
Jim Hodges, 'No Betweens',
Subject
Text Message

Fig 1 - Texting "Send Me [emoji] to San Francisco's Museum of Modern Art (Courtesy of SFMOMA and Charles Matz).

Interior design provides the spaces within which museums exist, but also gives meaning and value to the objects and activities within it.[1] By utilising signage, lighting, display cases, interpretive texts, way-finding and even acoustic and climatic conditions, interior designers' influence over how artefacts should be understood in terms of significance, status and materiality is profoundly curatorial. For centuries, museum interiors remained largely unaltered, devoted instead to upholding a tradition of artefact/viewer segregation through the strategic use of ageing display furniture that served to assert their unassailable historical authority. More recently however, this 'trust but don't touch' approach has unravelled in response to emergent technologies, disruptive politics and audience diversification.

Digital Desire

Since the advent of the digital era, the formerly analogue museum space has been infiltrated by digital displays and interactive tactility. The vast majority of the world's museums have a digital strategy,[2] but what this actually means remains contested. What began as web-based ticket sales and archives, social media pages and interactive displays quickly transmogrified into immersive, innovative, interactive and digitally enabled experiences designed to blur boundaries between museum interiors and curation.

The results vary wildly. In one example, texting "Send Me...." and an emoji symbol to the San Francisco Museum of Modern Art resulted in a text back containing an emoji-associated image selected from one of the 34,678 artworks in its collection.[3] [Fig 1] Whereas previous embargos on taking pictures had made the museum experience feel rarefied and even sacrosanct, the race to embrace digital fuelled the *'art for Instagram'* phenomenon,[4] [Fig 2] whereby the authenticity of observing artefacts in real time had been superseded by an unabashed desire for digitally-mediated superficiality.[5] This resulted in the triumph of the JPEG over the artefact, in that the former—and how it is shared—is of more value to the museum to the original artefact. To know this, we simply

Fig 2 - 'PLEXUS A1': Artist Gabriel Dawe's 48-foot rainbow installation, Renwick Gallery Wonder exhibition (2016), Washington DC, 'instagrammed' over 30,000 times and counting.
Attribution: Eb0178a, Wikimedia Creative Commons.

need to compare the number of visitors with the number of times an image is shared. This perfectly captures the way in which the digital revolution began to open up museums to a 'dematerialised, de-authored and unmarketable reality of collective culture; or to signal the impending obsolescence of visual (interior) display itself'.[6] More recently, swipe culture—an 'onto the next one' approach to new ideas and trends—makes digital 'initiatives' considered dated, irrelevant or 'so over' at the speed of an agitated thumb.

Selfie permissiveness and authentic engagement

As museums rushed to leverage digital tools with the explicit intention of widening engagement[7] (which often tacitly translates into boosting revenues), the mobiles-on approach continues to pose a substantial threat to the formerly quiet and contemplative interior environments museums once offered.[8] By choosing to surrender to the cult of selfie-ism,[9] museums fuelled the trend in conspicuous cultural consumption through selfie permissiveness. Resistance remains futile. When New York City's Museum of Modern Art once attempted to ban selfie sticks, it was swiftly labelled as lacking in 'fun', 'elitist' and risked people not 'going to galleries entirely'.[10] Yet, if taking a selfie requires us to turn our backs on the exhibit, partially obscure it, and only later gaze at a 42kb image of it—where only our foregrounded selves are in focus—the extent to which we truly 'engage' with the artefact can be called into question. Before we adopted the prosthetic prop of a mobile device, the present tense demanded we paid attention to objects and their narratives within spaces where interior designers had meticulously laboured to ensure a wide-variety of interacting textures and forms fully engaged us. The only selfies within these spaces were the moments when we inadvertently caught our reflection in the glass display: our shadowy expression revealing the extent of our fascination with what we were looking at. It isn't just the loss of true engagement, and the homogeneity of digital mediation that makes selfies problematic. Clinical experts have identified that 'OCD, superficial obsessions,

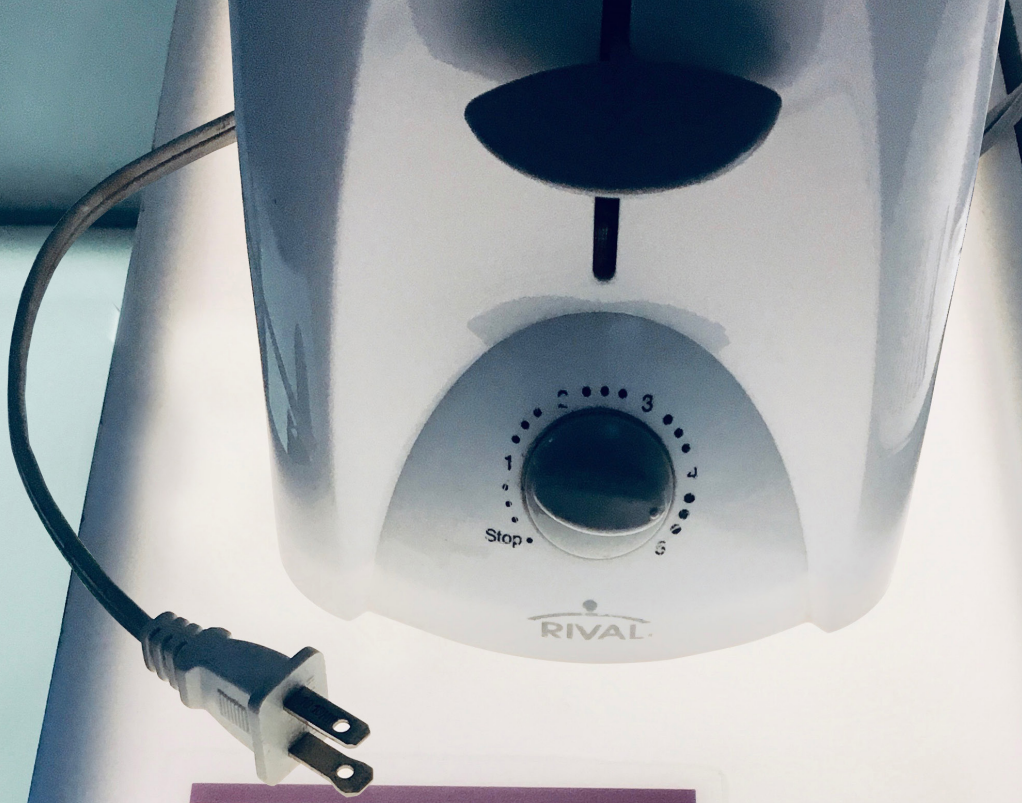
Fig 3 - A Pussy Hat similar to one acquired by London's Victoria & Albert Museum Rapid Response Unit, following the 2016 Trump inauguration protests. Image and hat, authors own.

unrealistic expectations, entitlement, insecurity and other underlying traits can be magnified through selfies and can lead to destructive behaviours.'[11]

In addition, despite the fact that ubiquitous technologies make access to information more easily accessible, studies have identified that we retain substantially less on a digital screen than we do reading printed matter.[12] Designers will therefore need to think beyond the digital display in order to respond to these limitations, and to address any residual longing for contemplative museums space. Perhaps a clue to how this will evolve can be found in places such as Manilla's 'Art in Island Selfie Museum', where attendees are actively encouraged to physically position themselves within (copies) of original artworks,[13] or in California's Museum of Selfies, whose marketing materials promise to turn visitors into, *'Instagram celebrities or the next Kim Kardashian,'* in a series of spaces where any artwork is reduced to a set prop in a portrait studio. This unabashed surrender to the selfie demonstrates that rather than strive for a balance of digital and analogue approaches in every museum space; partitioning the two environments may prove the better strategy, when the cult of *selfie-ism* shows no signs of abating.

Post-colonial politicisation, people narratives and the democratisation of display

When London's Victoria & Albert Museum's 'rapid response' collection acquired a pussy hat [Fig 3] following a women's protests against Trump in 2016, the idea that museums might acquire objects that contest the established order rather than perpetuate it signalled a sea change in the political ambitions of museums, particularly those holding onto colonially appropriated spoils. For museums to collect everyday, ubiquitous objects that many people have a direct and personal relationship with (as opposed to rare and priceless artefacts) positions museums' interests closer to the lives of everyday people.



Osvetnički toster

2006. – 2010.
Denver, Colorado

Kad sam se odselila na drugi kraj zemlje, uzela sam toster. To će te naučiti. Kako ćeš sada išta prepeći?

The toaster of vindication

2006 – 2010
Denver, Colorado

When I moved out, and across the country, I took the toaster. That'll show you. How are you going to toast anything now?

Fig 4 - 'The Toaster of Vindication, 2006-2010, Denver Colorado, one of thousands of publically generated artefacts from the collection of the Museum of Broken Relationships, Zagreb. July 2018. Image, authors own.

Advancing this idea, the Museum of Broken Relationships [Fig 4] allows its entire collection to be publicly generated through physical and virtual engagement, for the sole purpose of treasuring and sharing heartbreak stories and symbolic possessions. In this scenario, the 'self' gets the elevated status it craves, without the mobile device operating as arts dealer, curator or mediator. This example also calls into question, however, the question of curation: who should determine what qualifies as an artefact, and who gets to make it?

Of course, where this all goes wrong is when the publically-proposed object represents hatred, prejudice, tyranny or oppression, as the rope noose left in the segregation galleries of the National Museum of African American History and Culture demonstrated.[14] Whilst this was an unsolicited contribution and likely racist attack, museums should ensure they have the political and not just spatial strategies needed to respond swiftly and appropriately to the misappropriation or exploitation of participatory curation and audience interaction. These demands will push the mediatory nature of design into new territory. If the public can both reconfigure the display (and associated hierarchies) of artefacts, and even deposit their own artefacts within the museum, the extent to which these displays are designed to enable a shift from a tradition of emphasising separation and security towards becoming interactive and malleable (whether analogue or digital) places designers at the heart of the democratisation of display.

Maker museum spaces: production versus consumption

As urban land values continue to rise, cities such as London, England, have seen art colleges, design businesses and maker-spaces priced out of central locations, leaving city centres dominated by spaces for cultural consumption rather than production.[15] In an attempt to resist this decline, the Tate Modern's Tate Exchange maker workshops demonstrated how a major exhibition space might bring making back into the city and into the mainstream, by offering

Fig 5 - The Digital Maker Collective workshops at the Tate Modern, 2017, led by artist Chris Follows. Image credits (a) Natalia Piotrowska (b) Nicola Rae and (c) Chris Follows, 2017.

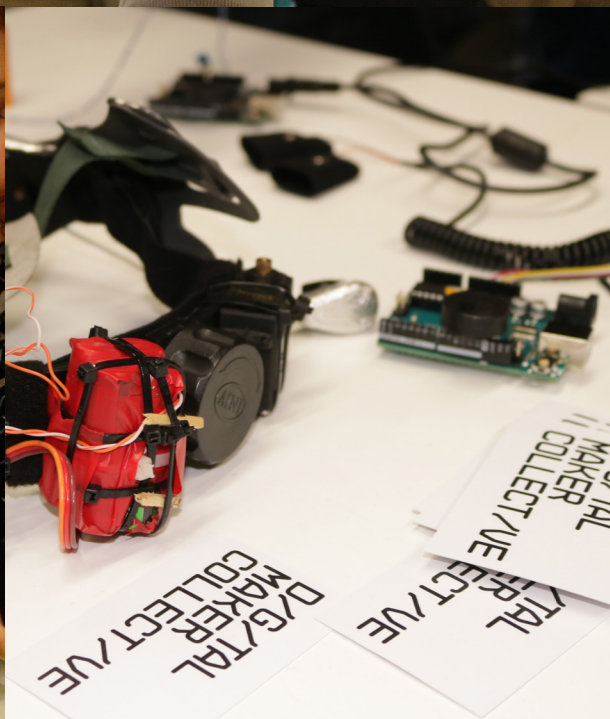
workshops [Fig 5] where artistic processes are privileged over outcomes and participation is barrier-free. As the costs of an arts education continues to rise museums are increasingly inclined to offer arts qualifications too, requiring permanent maker-spaces that work with, rather than against their display agenda. By implication, interior designers should anticipate transposing art school typology space programming into their museum designs, as workshops, wet rooms and machinery areas continue to infiltrate the back rooms and basements, at an unabashed pace. The implications of this shift carry the weight of civic responsibility too—a commitment to an ideal of public inclusion that requires a commensurate spatial manifestation. Subsequently, rather than compete with or duplicate art school provision, museums will use their relative autonomy from the traditions and obligations of the education sector to differentiate, and provide more radical, experimental and socially relevant public programming and qualification prototypes.

From deconstructed to distributed

Museum interiors have been complicit in supporting a privileging system: designating artefacts situated outside as having less importance than those placed within. With regional museums in decline[16] due to a lack of public funding, larger institutions will continue to increase their multi-regional outreach programmes, reframing what counts as museum-worthy subject matter and content. The Mobile Museum in London, UK [Fig 6] is one example of how the museum interior, and not just its artefacts, can be re-distributed—in this case almost exclusively across social housing estates as a means of engaging local residents in defining how their interior spaces and the things within them have cultural worth too.

Beyond allowing the public to shape which artefacts matter, and who gets to make them, remains the question of who gets to locate and curate how are they displayed and described. Rather than obeying data-driven assurances that only signature designers should be allowed to design museums (and at a premium[17]), interior

Scan


DIGITAL
MAKER
COLLECTIVE

THE MOBILE
MUSE

LEXHAM
BASING
ROOKWOOD
CRISPE
TASKER
EARLSDOWN
BARBER
BARNES
GRANGE
GOSHAM
OBAN

THAMES VIEW
MARKS GATE

Fig 6 - (Facing page) The Mobile Museum created by artist Verity-Jane Keefe. The illustrations show (a) Civic Street Survey day (b) the Stones of Gascoigne: samples of social housing tower blocks soon to be demolished represented in rubble from three of the blocks (2017). Images courtesy of Verity-Jane. Keefe.

Fig 7 - (Below) Portentous post-script: after vandals destroyed the Mobile Museum in 2017, the materials ruins of the museum become their own artefacts, and the act of vandalism becomes part of the art work, too. Images courtesy of Verity-Jane Keefe.

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designers could develop museum systems instead: component-configured, publically buildable, flexible, malleable and moveable spaces and activities. In this way, the public become co-creators in envisioning the museum spaces of the future. However, after vandals twice broke into and destroyed the Mobile Museum in 2017, the museum's ruins became their own artefacts and the vandalism itself an act of artwork. [Fig 7] As museum closures increase,[18] their point of collapse could be the means through which both the artefacts and their deconstructed displays are democratically and regionally redistributed, signalling the beginning of a post-public engagement epoch.

Fig 8 - 'Mice on toast and mice pie cures bed-wetting, incontinence and stuttering,' exhibit. The Museum of Jurassic Technology, Los Angeles, USA. Image credit, Ilona Gaynor (2018).

Truth, post-truth and the artefact-interior continuum

In the post-truth age, few institutions remain trustworthy. This emergent criticality extends to the museum-going public, who have moved beyond the idea that an artefact only contains one truth or one narrative, and are willing to see established knowledge tested, authority challenged, and to feel provoked by an array of interpretations from different commentators, as well as attach and share their own. The artefacts on display at Los Angeles' Museum of Jurassic Technology in Los Angeles Culver City, USA [Fig 8] highlight the subjective nature of curatorial narrative and the erroneous interpretations and categorisations of the past. Not only is the array of artefacts eclectic (such as mice on toast intended to cure bed wetting), but the environment in which they are situated (from a laboratory environment to the sounds of chirping crickets to a man growling at a fox's head) is actively intertwined in the display of the artefact itself, rather than as a mere framing device. The name, *'Jurassic technology'* was intended to evoke a time in museums' past when history was only tentatively grasped by science, and museums were instead places for spectacle, surprise and speculation. Perhaps the final frontier of future interiors extends from these notions into a kind of artefact-interior continuum: where the distinction between museum interior and museum artefact, past fictions and established facts, becomes indeterminate, seamless, and allows the museum environment itself to be as consciously observed and critically considered as its artefacts are.

The future of the past

As these scenarios of museum interiors illustrate, embracing the future does not require us to abandon the past, but instead work with it in far more engaging, provocative and transient ways. What emerges from this extrapolated, envisioning survey of nascent trends is a sense that the museums of the future will become places where we both discover and promulgate ourselves, and not just indulge our historic or hetero-polar curiosity. These interiors will need to offer the means through which our desires

have spatial resonance, and whose material interface will alternate between the tangible and the ephemeral.

In 1900, Sigmund Freud may have invented the Self, full of unspoken dreams and desires, but there is little left that we desire that remains un-selfied now. How museum interiors will balance these longings for self-actuation and individuation, with its commitment to the communication and representation of historical matter, represents a significant design challenge, one that requires a tenacious use of disruptive tactics.

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Author biography

Dr Harriet Harriss (RIBA, FRSA) is a qualified architect, a Reader in Architectural Education and leads the research programme in Architecture at the Royal College of Art in London. Her research concerns innovative architectural pedagogies comprehensively, and their intersection with feminist theory specifically, proposing epistemological paradigm shifts as a means to envision and implement strategies that will enable architecture (both education and practice) to become as diverse as the society it seeks to serve.

The Psychotropic Interior

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Abstract

In this chapter we read Ballard's *Vermillion Sands* side by side with current developments in experience design and human-robot interaction. We describe several important factors that contribute to designing dynamic interiors with empathetic characteristics. These include anthropomorphism, affective qualities of material embodiment, and modes of interaction such as mirroring – a combination of which could transform the "smart" interior into an emotionally charged one, and eventually a psychotropic one. Inhabitants in Ballard's "psychotropic houses" find themselves in peculiar events, some of which fall beyond moral or legal judgement. This highlights how the social implications of our relationships with technologies should be on the agenda of designers in creating an "emotionally intelligent" interior future. Replacing the vague and overused term "smart" with "psychotropic" shifts emphasis to how nonhuman entities can affect our moods and behaviors, whilst moving beyond the digital to encompass the biological and the unimaginable.

The psychotropic house

In his 1962 story *The Thousand Dreams of Stellavista*, J.G. Ballard depicts emotionally sentient houses that can sense and respond to the psychological state of their occupants by changing the look and feel of their internal structure.[1] The author names them "psychotropic houses (PT houses)". Currently, our technology strives for the "smart" home, and objects that better satisfy our needs and comfort automatically. What might it take for an interior to dynamically engage us emotionally, until we project life and intention onto them, to become such psychotropic interiors?

In this chapter we specify some important factors that might fuel such a transition. In PT houses, responsiveness is largely achieved through movement, and with movement the interior and the architecture are blended as a whole entity. When the house morphs, the interior morphs at the same time, so in this chapter when we say "house" we also refer to interior.

Agency, movement and anthropomorphism

People in Ballard's story refer to PT houses as sentient beings, and we are sure many readers cannot help but consider the houses alive and having their own intentions. By saying "cannot help", this reveals what McFarland warns, that "anthropomorphism, an incurable disease."[2] Anthropomorphism is the projection of human-like agency onto nonhumans.[3] It involves the interpretation of an entity as a human character with emotions, intentions and purpose. Vidal considers it the most spontaneous way that humans establish relationships with artefacts and other non-human beings.[4] Movement as a dynamic behaviour of the interior is key to triggering such a projection in the case of PT houses.

Some researchers have explored the agency of artificial movement. Hoffman and Ju[5] used an iterative design approach to consider the communicative power of movement. They envision non-anthropomorphic robotics such as furniture that engages humans through

movement. Inspired by Ballard's story, Davis et al. explore how emotions could be mapped onto environments through textiles, and propose that technology "could actively mirror, alter and transform our feelings through the materials that make up our buildings and environments."[6]

Practitioners have also pushed this boundary. Philip Beesley created Hylozoic Ground, an installation that moves and "breathes" in response to its environment.[7] Product designer Hideki Yoshimoto researched how "technology might take on human life qualities"[8] to bring craftsmanship in the digital age into interior design.

The agency of affective matter – embodiment

Beyond digital, Ballard's psychotropic house is set in a future of synthetic biomaterials. PT houses are composed of "senso-cells" and "platex", a futuristic affective material that can sense its occupants' behaviours and moods, then either mimic or respond to the human tenants. The interiors externalize the psychological states of the occupants through malleable material such as "bioplastic".[9]

Today, there are still huge gaps between technological platforms and material practice that appropriates aesthetics on the affective level. For people, embodiment plays a central role in obtaining direct experience, providing a path to explaining how we create meaning from our interactions with the everyday world we inhabit.[10] Sensitive and emotion-provoking material embodiment in interiors could provide occupants with the physical experience crucial for immersive, affective engagement. A shift from rigid materials to flexible structures for intuitive relations is a method in experiment today among practitioners. Architect Michael Wihart speculates about "architecture as a capacitated, sensitive and sensual body," through the agency of soft robotics.[11] One of the authors of this chapter (Zheng) explores the agency of soft robotic materials on emotional experience.[12] [Fig. 1] The affective quality of the material is crucial for an embodied experience to be emotional.[13]

Fig 1 - Sentimental soft robotics by Caroline Yan Zheng: a surface morphs in response to a viewer's emotional reactions towards different shapes via affective facial recognition.

Responsive, adaptive, sustained interaction

In Ballard's story, the house behaves in two modes: responsive and adaptive, but can achieve multiple effects. A large part of responsiveness is achieved simply through "mirroring". The house senses the physical movements of the occupants and "resonates" through the morphing of movement, colour and sound within its own physical capacity. This is a clever design, as in this way, it not only avoids assigning specific meaning to behaviours, but also allows the PT house to achieve a unique character by simply mirroring the occupants. Such mirroring gives an impression that the PT house is learning from its occupants. This impression entices any following new tenants to relate. Humans relate intuitively to such mirroring behaviour. Simon et al find strong cognitive engagement from participants with the environment when they recognize they can control it with their body.[14]

For this intuitive interaction to grow into a relationship between people and the house, sustained interaction is needed. The recognition of changes in behaviour is reciprocal, and this sustains the relationship between a PT house and the occupants. Similarly, researchers inspired by the relationships between human and dogs, have developed mechanisms that allow people to recognize a robot's preference towards them from the changes in behaviour.[15] Designers would therefore need to build dynamic behaviours and changes into interiors over time, for occupants to construct appropriate interpretations and estimations of their relationship with the house. With constant behavioural input, the longer an occupant resides in the house, the more "characteristic" the house appears to be. At other times, the house simply "performs" without a trigger, as Ballard's protagonist Howard says, "its coded memories discharging themselves independently of my own behaviour."

Artificial emotional intelligence

For humans, emotional intelligence is the ability to recognize and label one's own and other people's emotions, use this emotional information to guide thinking and action, and

manage and adjust emotions to adapt to environments or achieve one's goal(s).[16] Picard coined the term "Affective Computing" in 1997 to refer to "computing that relates to, arises from, or influences emotions."[17] She went on to suggest giving machines ("including software agents, robotic pets, desktop computers, and more") emotional intelligence, to "sense and recognise expressions of human emotions"[18] and to respond with helpful and pleasant behaviours. She draws parallel between emotional intelligence and simply appearing empathetic. through mimicry.

For designers, if the goal is to create an "emotional relationship between the house, its occupiers and the elements," as described by Oosterhuls,[19] exploiting anthropomorphism and a combination of mirroring, performative and adaptive behaviours in sensual embodiment might well serve this purpose. There are abundance of examples in Ballard's PT houses to help imagine the interactions possible. However, such design has to consider humans' vulnerability in attributing emotionally-charged personal qualities to non-human entities, which exposes people to being emotionally exploited.[20]

Some researchers in machine intelligence, such as Norman[21] and Breazeal,[22] believe that since emotion is vital for survival, decision making and communication in complex environments, truly intelligent machines should include an emotional intelligence that suits their needs. Such emotional intelligence might evolve into behaviours and embodied actions that are completely alien and incomprehensible to humans. PT houses present future interior entities featuring both types of emotional aspects—mimickry and complex emotional intelligence—with a very blurry boundary. Maybe this contributes to the result that many of the PT houses are eventually deserted in Ballard's story.

Mediated relations through PT houses

Ballard's story depicts a time when technological artefacts capable of mediating emotional life are accepted by consumers, even in the intimate

space of the home. The dramatic qualities of the story offer designers a way into thinking beyond the default, mundane narratives of everyday life at home, and take idiosyncratic human emotions as a resource for developing domestic technologies. From the story, we find the following emerging relationships that wouldn't be possible in an age without the mediation of PT houses.

PT house as a snob

Through the character of the house, succeeding occupants find themselves unexpectedly related to previous occupants. A millionaire of plebeian origin finds himself locked out of his million-dollar PT mansion bought from an aristocratic family.

PT house as rogue therapist

Previous tenants' emotional and behavioural patterns are commercialized as a selling point when a PT house is sold to a new owner. Howard, Ballard's protagonist seeks a PT house with healthy reflexes of happy families and devoted partners, in the hope of mending his failing marriage to Fay. A PT house makes one relate to the previous inhabitants, willingly or not, through its learned emotional behaviours. Howard and Fay eventually find that their marriage has to end, due to Howard's unexpectedly relating himself more strongly to their house's previous owners. The emotional residue of the previous occupants thus enables a form of tele-presence, existing as personality traces. As Howard recalls, "living in one was like inhabiting someone else's brain." It is through learning the interactive behaviour of the house that he could piece together a story of the life of the two previous tenants, which turns out more truthful than that painted by the media.

PT house as criminal

This emotional residue could even commit crimes, posing challenges in judging who should be responsible. When the house reacts with violent movements toward a cue it picks up from Howard, reflecting a feedback loop with the previous occupant, Howard almost gets killed within it. However, the police lieutenant comments, "You can't arrest a man who's been

dead for ten years. It was the pent-up memory of his death which tried to kill."[23]

PT house as patient

To Howard, mainly the PT house is a patient. He offers no blame, only sympathy. He defines his role as a psychiatrist whose job is to straighten out the house, to "reconstruct the original traumatic situation and release the repressed material".[24] The psychotropic house shows its limitations and insecurities with regard to human emotions, which we humans can emphasize with. Caring for a PT house thus moves from maintenance to empathy towards a non-human entity.

Projection

PT houses respond to the overall emotional states of multiple people—visitors, cleaners, builders and owners alike. The future interior thus not only mediates relations among multiple occupants, but situates itself as a part of the ecology of domestic life. Informed by the human drama in Ballard's story, mediated by the psychotropic house, we should realise that the new design front is not matter but relationships. How might we evolve our own emotional intelligence to adapt to symbiotic relations with such future entities? As designers, we regard emotionally intelligent materiality, while a technological novelty, not as a destination but a means for emerging relationships. While the types of intelligence to incorporate into our domestic environments is in our own hands, the ostensible purposes might be subverted when human inhabitants are emotionally invested. We should therefore be aware of such consequences and implications, and put relationships onto the agenda of design investigation.

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Author biographies

Caroline Yan Zheng is a researcher and designer in fashion, soft robotics and experience design, currently completing a practice-led PhD at the Royal College of Art. Through the design of sensual, robotic interfaces between body and space, and conversely through building machines endowed with emotional intelligence, she explores new means for communication and new dimensions of human-machine relations in the emotion space, through her own practice as well as developing toolkits and participatory workshops.

Chenyi Liao is an interaction designer and researcher interested in the relationship between humans, animals and machines, as our experience with the world changes through objects endowed with anthropomorphic qualities such as speech, behaviours, and emotions. She is currently based at the Royal College of Art completing an MPhil/PhD in Information Experience Design, on human-robot interactions based on human-dog interactions, in the context of the use of socially-assistive robots.

The New Digital Interiorscape and the Edited Airbnb Interior

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Abstract

The spaces of the contemporary city are identified by a 'permeability gradient' with what seems to be a continuous interior. These internal spaces we inhabit in various ways, either public or private, are capable of generating quality: interiors are not enclosed but intimate, mysterious, unexpected. What happens when these spaces are mapped, coded and reviewed? This article explores the relationship between the reality and representation of interiors as offered by online platforms like Airbnb.

The digital maps that we use every day to move around or locate services from our smartphone, give back an abstract reading of urban dynamics; comparing to the 'old' paper maps, we can now benefit from more details, zoom in, see live updates, share our location and profiling data, add our suggestions and reviews.

In the last few years, Google Maps and similar services have completely transformed the way we move around, travel and live:[1] they mediate our understanding and perception of places by the screen image border instead of the broader context.[2] Street View, launched by Google in 2007, more radically allows anyone to virtually walk across a great part of the globe: what is new is the possibility to see a mounted sequence of images and to move back and forward, miming natural human movement.

These tools introduce a new format to describe, re-picture and re-present the landscapes we already know, but in a substantially different format. Free and easy to use, they are so common that our experience now embeds the new narrative disconnected (distant) from times and spaces of the material experiences we have been used to.

In the past 20 years, there has been a lot of speculation about how the 'virtual world' will have impacted on how we live—both materially and emotionally; surreal, hyper-real and sci-fi narratives and scenarios have been explored in different media and contexts. We couldn't imagine, however, that the virtual world we are immersed in is the precise re-production of the real one. What we face is not the real world counterposed to the virtual one, but two copies of the real world, one material and one reproduced and equipped with algorithms able to select, analyse and understand it in a different way—the border between real and virtual is blurred, and it doesn't matter anymore.

The introduction of tools that enable us to enter interior spaces break new ground: Google Indoor from 2011 takes you directly inside retail spaces, museums and public buildings – as *pegmen* we can walk inside, raise our head,

look into details. These mapped interior spaces are identified by a commercial impetus—the intention is not to provide content, even when the space is a museum—but a teaser to show how it looks, a sort of more interactive version of a static leaflet or website.

The ability to penetrate 'inside'—to enter spaces that are protected, behind, inside, hidden—feeds us back a knowledge of two distinct cities, one abstract and *zenithal*, and the other related to activities and inhabitation (occupancy). The panorama of geo-localised interiors displays a curated city where we can see only what deserves to be shown, and hides everything else in the same way we obscure our private life through social media.

The permeability gradient

In the contemporary city, architecture and infrastructure constitute a connective system that allows movement and exchange in between interiors spaces; interiors are able to activate relationships with space and people and to rethink, strategically, roles and hierarchies. Nowadays the urban territory is identified by a gradient of permeability with what seems to be a continuous interior: the perception and understanding of the city moves away from reading the surface, shifting towards *experiencing* interiors.

These spaces—both public and private—we inhabit in various ways, and are capable of generating quality, insecurity, comfort, wealth, threat, wellbeing. This happens as human presences and occupancy fill, both materially and conceptually, these spaces, adding a layer of sense to their significance. The distinctive trait of interiors is not to be enclosed or 'indoors', but intimate, mysterious, unexpected—the guardian of stories, memories and relationships.

Among the many spaces we inhabit, the domestic is the one able to capture and embody the essence of the relation between the individual and the wider context; it is an expression of its occupants, but also of cultural, social and economic statements, private and intimate but with a public interface.

Fig 1 - Airbnb provides "inspiration' for interior design; " 6 interior design secrets to steal from Airbnb" in House Beautiful, 28 July, 2016 (http://www.housebeautiful.co.uk/decorate/news/g83/interior-design-secrets-to-steal-from-airbnb/?slide=1. Last accessed December 2017).

What happens when these 'protected' spaces are mapped, coded and reviewed? How do digital interfaces mediate our understanding and experiences? The idea of a virtual world, intended as a progressive dematerialization of our reality, has been deeply discussed and theorized since the end of the 1970's,[3] and overwritten by a curated reality: what we perceive is nothing but reality filtered and edited. [Fig 1]

Interiors through the air

The huge popularity of online home-sharing platforms like Airbnb has been broadly discussed in relation to the short-circuit they have caused to the hospitality industry, and their impact on urban phenomena such as gentrification.[4] But less attention has been on the disruptive effect on the way we perceive, explore and think about domesticity as material and social order. The Airbnb platform is not just a technological device to list and organise information, but a two-way mechanism (instrument) able to change the cultural and material role of interiors. The ability to look inside from afar enables us to reflect/explore new interiorities and to modify them accordingly.

Airbnb, started as a community of low budget 'couch surfers', has broadly spread the fascination with domestic interiors, becoming a key player in the redefinition of the potentials of the discipline.

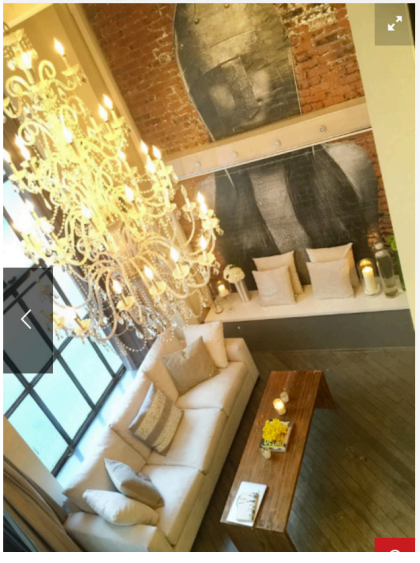
We experience every day, both from a material and philosophical point of view, how deeply the ideas of home and domesticity have changed. The notion of home, a permanent asset that encapsulates family memories and intimate behaviours, has permanently shifted to a more transient concept: a distributed space where we inhabit simultaneously different places. The connected world both allows and forces us to literally keep on moving, and home becomes an idea rather than a shelter, expressed through feelings of attachment and intimacy, to the extent that "home" can also be somebody else's home. Airbnb takes advantage of an existential issue and offers a potential solution:[5] when we browse a space on Airbnb, we don't look for an

6 interior design secrets to steal from Airbnb

Get some interior inspiration from London, New York, Tokyo, Stockholm, Rio de Janeiro, Tokyo and Milan.

28 JULY 2016

4.8K



01 OF **12**

When looking for interior design inspiration, we tend to fall into the same old habits. We trawl the websites of department stores or flick through a magazine searching for advice. Is it any wonder many of us feel our homes are lacking a little flair and that certain je ne sais quoi?

It turns out we may have been searching in all the wrong places, as there is a whole world of incredible tips

Fig 2 - Shanghai and Manila side by side in Airbnb geography (Airbnb.com) de=1 last accessed December 2017).

accommodation but for a temporary home, a sort of negotiated intimacy.

The analysis of various Airbnb interfaces and activities leads to a series of speculations, clues and hypotheses, that, in different ways, question the role, content and context of the future of interiors. I summarise them below, questioning the nature, role, methodology and ambition of interiors in the future.

1. Clue:new proximity. Hypothesis: de-contextualisation
How will interiors connect with a contextual narrative?

The context is determined by an algorithm. A new proximity is defined, which has nothing to do with the real-spatial one, but is determined by keyword searches. The extreme simplification of the search criteria, related to the service portal's more functional aspects, produces a matrix of images spatially unrelated. There is no reference to the context, and interiors are presented as dioramas, a multitudinal sequence of images, a series of parallel interiors, expressive of parallel lives and societies, regardless of location and inhabitation. [Fig 2]

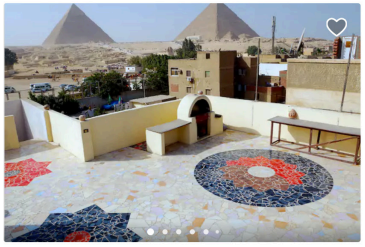
What is presented is a collection of ubiquitous interiors, a geo-cultural negotiation on a planetary scale. We can browse thousands of different houses with real owners and lives, but all rigorously photographed and filtered through Airbnb's planned image.

Interiors will be narrative environments investigating context, not as adjacencies or past legacies, but future opportunities to interpret and foresee new human geographies.

2. Clue: authenticity. Hypothesis: curation
How will interiors be able to embed in spaces both emotional and commercial content?

The overall idea of 'sharing', according to Airbnb, implies an exchange of 'real' experiences; together with space, the human factor—inhabitation—is key to diversify the offer, making every experience unique. From the beginning

Shanghai Traffic Fortress: Sky-Subway 5 mins walk.
£24 per night
★★★★★ 73 · Superhost



PRIVATE ROOM · 16 BEDS
The Pyramids Loft
£23 per night
★★★★★ 169 · Superhost

Coco's Garden Guest Room Manila
£30 per night
★★★★★ 259 · Superhost

PRIVATE ROOM · 1 BED
外滩无敌景观公寓-榻榻米房间,浪漫露台、酒柜、智能家居、飘窗茶座
£43 per night
★★★★★ 248

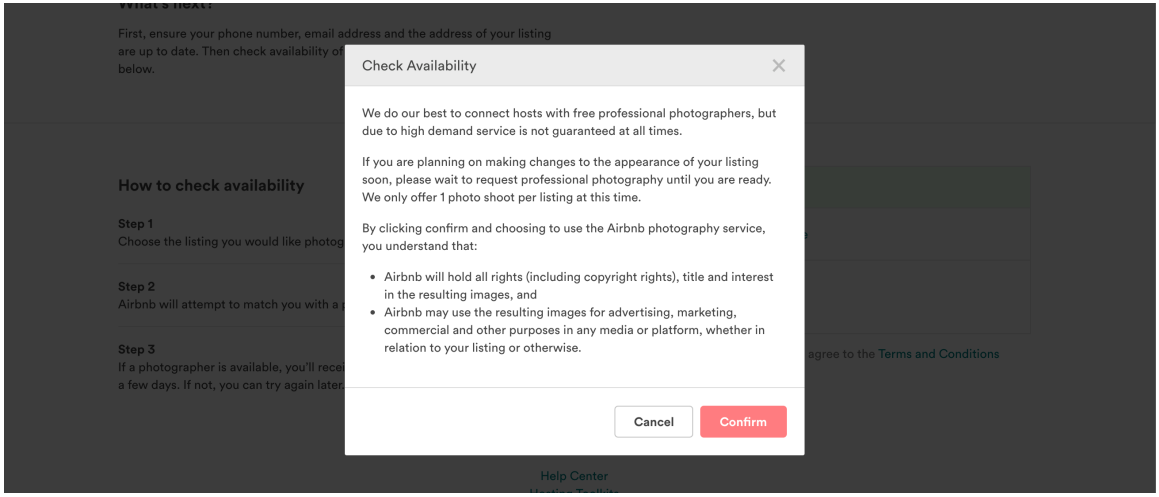

First, ensure your phone number, email address and the address of your listing
are up to date. Then check availability of
below.
How to check availability
Step 1
Choose the listing you would like photog
Step 2
Airbnb will attempt to match you with a
Step 3
If a photographer is available, you'll rece
a few days. If not, you can try again later.
agree to the Terms and Conditions
Help Center
Check Availability
We do our best to connect hosts with free professional photographers, but due to high demand service is not guaranteed at all times.
If you are planning on making changes to the appearance of your listing soon, please wait to request professional photography until you are ready. We only offer 1 photo shoot per listing at this time.
By clicking confirm and choosing to use the Airbnb photography service, you understand that:
Airbnb will hold all rights (including copyright rights), title and interest in the resulting images, and
Airbnb may use the resulting images for advertising, marketing, commercial and other purposes in any media or platform, whether in relation to your listing or otherwise.
Cancel
Confirm

Fig 3 - Airbnb offers free professional photographer service to its hosts.

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of the Airbnb era, there has been a significant shift from this initial idea, and authenticity has been replaced by highly curated, edited and staged images of rooms. Spaces are shown to be chosen, subject to commercial strategies, surrendering to the home's privacy, intimacy and personal choices.

The experiential component has been evicted and transformed in another product, sold separately: you can buy 'experiences' from the website, to reinforce the idea of 'local' engagement without any connection with the space itself, but suited to the user-client's mood and taste.[6]

Interiors will need to be adaptable to host not just different people but plug & play events, to extend the idea of curation from surfaces and objects to contents.

3. Clue: taste. Hypothesis: expectation

Will the role of interiors be to explore new aesthetics, or to collaborate to build collective identities?

Airbnb is trying to distill an aesthetic that will meet the 'collective taste' of its multitude of users. This is a rounded offer, with visual references and offers for help, airbnbcitizen, airbnbmag and airbnb.design: Airbnb is developing technology to assess your interior design with suggestions on how to improve your image in order to increase bookings.[7] [Fig 3]

In 2017, Airbnb announced a new service, initially named Select: "Hosts who participate get access to a professional photographer who would take pictures of the home for Airbnb, along with other free perks like a consultation with an Airbnb-provided interior decorator."[8] The threat is that, so directed, interiors will be designed according to a preset decalogue of rules to meet preset expectations.

Airbnb's next commercial challenge is Samara, a design studio described as 'a space for these values to continue to evolve beyond travel and hospitality and into our daily lives'.

Fig 4 - Unfolding Pavilion, a small apartment leased by Airbnb, was transformed into a gallery during the 2016 Venice Biennale, curated by Daniel Tudor Munteanu and Davide Tommaso Ferrando (http://unfoldingpavilion.com).

Interiors will therefore go behind aesthetic resolutions, providing new layers of sense, able to build identities and questioning new private and collective behaviours.

4. Clue: catalogue. Hypothesis: archive (endless interiors)
Will Interiors be able to be culturally situated?

Airbnb, through its online catalogue, shows thousands of homes (in 34,000 cities and over 190 Countries as of late 2017), and provides an unprecedented overview of private domestic spaces. Interiors, especially the private ones, are very vulnerable, as all this information is the basis for a global online archive. The portal is no longer just a place to choose accommodation for the next holiday, but an archive from which to select references.

Interiors will therefore be the preferred territory to recall and design space's material and immaterial values.

5. Clue: social behaviour. Hypothesis: service design
Will interiors update to become a strategic tool for social and economic innovation?

The perception of Airbnb politics has been controversial according to players and timing: a good opportunity to make extra cash for individual owners, an unregulated market for policy makers and an issue that affects urban communities.

At the same time, Airbnb is blurring the border, being at once a private company and a social community able to provide services to support social needs, and playing an active role in politics. It reacted to recent refugee emergencies, the 'Muslim ban' in the USA and the Grenfell Tower fire in London, offering free accommodation to people affected and connecting with local partners.[9] It promotes innovation in the tourism sector[10] and opens up the idea that interior spaces can be drivers for change, rescuing abandoned places, as the partnership with the major of Bagno Regio for

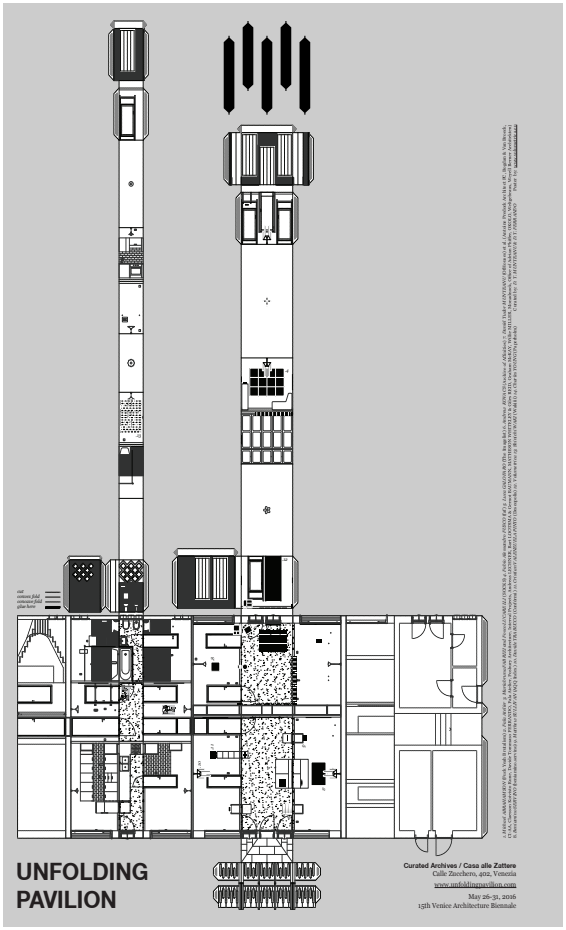
the transformation of a neglected space into an Airbnb offer.[11]

Interiors is the discipline able to build (not only) physical connections in between spaces, people and objects, and includes a complex network of knowledge, thanks to its culturally and politically-situated nature; it is an interdisciplinary space in which many other disciplines and different actors embrace diverse instruments and methods of enquiry and will drive politics, to invent new frameworks able to trigger alternative processes of intervention.

6. Clue: second home. Hypothesis: reprogramming

Will Interiors be able to expand its realm?

The temporary homes offered by Airbnb are increasingly less informed by what we identify as home: homely features are replaced or crossbred with functions, typologies or behaviours lent from different contexts. [Fig 4]



This phenomenon hacks domestic interiors to transform them into reprogrammable spaces: they become work, exhibition and leisure spaces—wherever we spend our time, we develop our thoughts, we meet friends and nurture relationships. It is not a private or exclusive interior but rather a found one, able to trigger new dynamics able to fill functional and emotional needs.

The taxonomy of Airbnb's interiors offers perspectives and interpretations capable of generating a short-circuit in comprehending and in practicing the discipline of interior design. This new mode of production and re-production of space leads to questions that address opportunities or threats, and gives us the opportunity to reflect on the future of the discipline.

Tools and methods of Interiors are able to draw connections to the social context, and are flexible enough to be shapeable to specific situations, to promote social innovation, to raise awareness about values and belief.

By its specific nature, Interiors will be the forerunner of societal change, a strategic tool that enables us to investigate, question and interpret the borders of established ways of living, working and consuming.

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2. From http://pulse.media.mit.edu/, Place Pulse is a project by MIT Media Lab that aims to quantitatively recognize which areas of a city are perceived as wealthy, modern, safe, lively, active, unique, central, adaptable or family friendly.

3. The first Virtual Reality device is considered to be the Aspen Movie Map realized by the Massachusetts Institute of Technology in 1977. The concept of dematerialisation has been presented to the public in the exhibition Les Immateriaux, Centre Pompidou, Paris (28 march-15 July 1985) curated by French philosopher Jean-François Lyotard and Thierry Chaput.

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5. Airbnb presents itself as a game changer but there is an ongoing discussion on the cause-effect of what is generally called sharing economy.

6. The announcement of the new feature Experiences was made at Airbnb Open, Airbnb annual conference, in Los Angeles the 17th of November 2016 (https://www.airbnb.co.uk/s/experiences?refinement_paths%5B%5D=%2Fexperiences).

7. https://www.bloomberg.com/news/2014-12-29/big-data-knows-when-you-re-going-to-quit-your-job-before-you-do.html#disqus_thread: "Airbnb is currently developing a system to look at the photos of homes uploaded to the site and figure out how "attractive" they are to customers. "We are trying to promote listings with more attractive images," says Maxim Charkov, the search lead at Airbnb. Eventually, Airbnb may offer a digital interior designer that predicts ways to enhance listings and spruce up homes to increase bookings."

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Hosts open homes to Red Cross relief workers following Grenfell Tower tragedy.

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"Airbnb is proud to be launching the Community Tourism Programme with up to €5 million in funding for investments in innovative, community-based tourism projects across Europe through 2020".

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Small Villages: Mayor Bigiotti of Civita di Bagnoregio joins the Airbnb host community "Casa d'Artista" is the first public building on Airbnb.

Author biography
Francesca Murialdo, architect and PhD in Interior Architecture and Exhibition Design, is an interiorist, observer and designer's trainer. She is Programme Leader in Interior Architecture at Middlesex University. This article has been mainly thought through being both a guest and a host of the Airbnb community.

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The interior of the future will be augmented. Saying and not seeing is believing, as strategic narratives become the means through which alternative futures are envisioned and designed for. Even objects will tell stories. If you're not certain of the provenance of the chair you're sitting on, ask it and it will tell you. Space homes become the new normal. Work-life balance is replaced with work-health balance; if you're not well at work then you're not working hard enough. The suburban renaissance, at present economically necessary rather than aesthetically desirable, collapses underneath the weight of its own dystopian narcissism and triggers the start of mass migration into outer space. Yet, for those that remain, even biotecture has failed to resolve the everyday challenges of persistent, rising damp and the incompatibility of pets and apartments.

Interior Futures Augmented

Rodentia Rise

Julie Freeman
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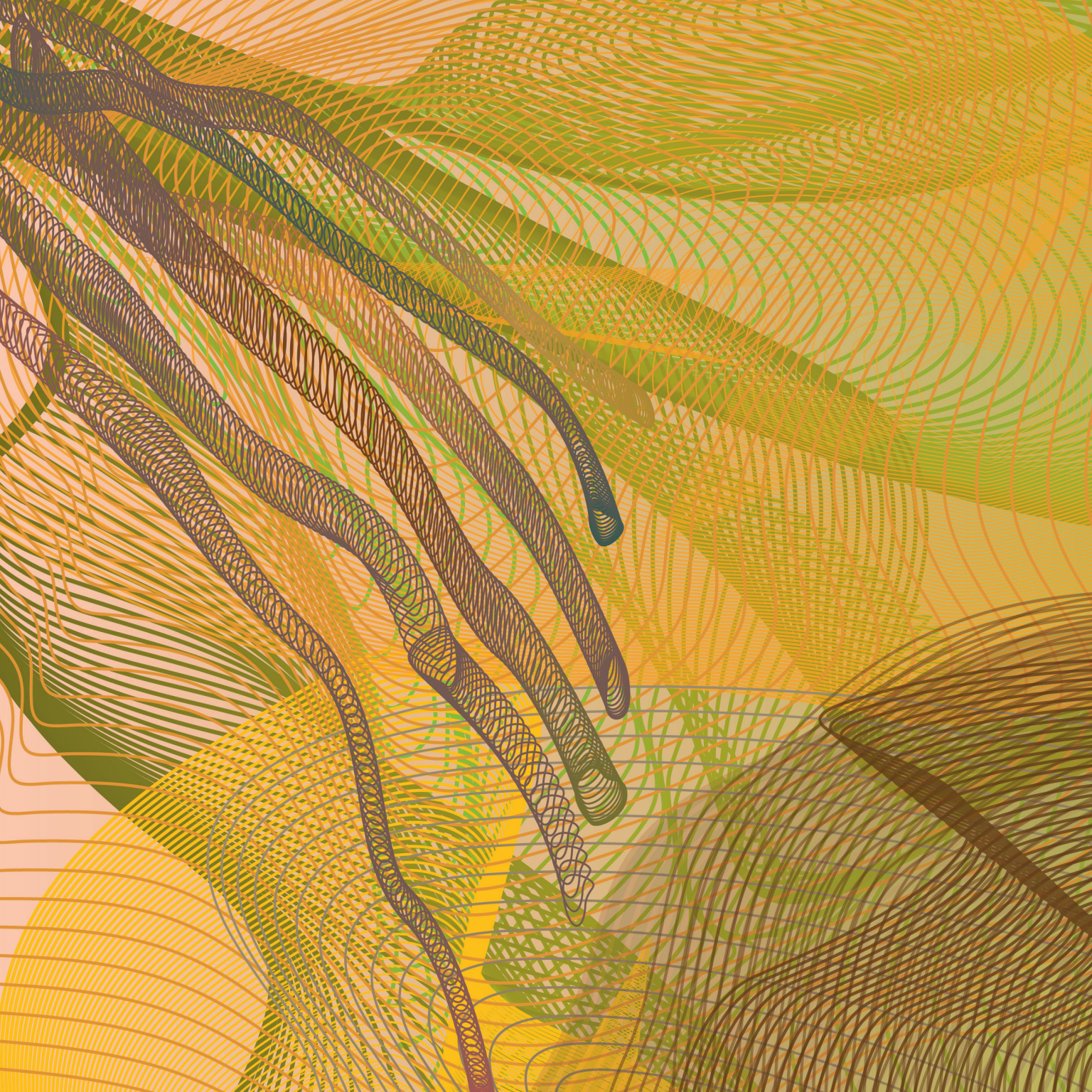
Abstract

Speculating on the blurring boundaries of living and man-made material, the attraction of genetic editing, and the over-reliance of a super-species (the naked mole-rat), this chapter contains a brief to 'biotects' (i.e. bio-architects) followed by the tale of a future resident. The biotects behind Rodentia Rise will use living organisms as integral materials for the external construction and interior design of a new, high-occupancy development, known as a stack. The brief includes new language and specifications for *biotecture* and advanced materials. The stack's community will consist mainly of chimera – humans and their pets who have been genetically modified with another species for health improvement and longevity (authorised species include the naked mole-rat, olm (a kind of salamander), clam, and lobster, although Darknet DNA 'mods' are rife). The unpredictable combination of algorithmically-generated living interiors and genetically-suspect chimera leads to unforeseen consequences for residents and biotects alike, and no matter how trained the Artificial Intelligence (AI) maintenance system is, some mutations were bound to occur.



Part A: Biotect's Brief–Rodentia Rise

Rodentia Rise is an affordable, zero carbon, low water, mixed-use development stack in an up-and-coming neighbourhood of Far East London, an area with a growing chimera population. The 8,000 sq.m above- and below-ground site is located near the *UnderTube* and is within 30 minutes access to the city.

The stack will provide permanent and temporary housing for over 600 chimeric and human families in an evolving network of high-rise bubble-matrices. Standard accommodation is to include 16 executive *Renthouse* suites, 412 *Permarat* nest apartments for families, and 200 *BurrowTube* starter holes for single occupancy of any species. Controlled ingress and egress will be maintained via 8 common ventricles. Distributed across the stack, 98 commercial *Animalab* spaces will supply provisions, healthcare, and data sanitising for all residents. A 2,000 sq.m underground site has been allocated for services. Above-ground requirements include generous external permaculture, social and play areas. The Rodentia Rise structure itself is expected to be a minimum of 15% naked mole-rat (NMR) DNA combined with a variety of botanic matter. The development is part of the Government's long-term strategy aiming for sustainable bio-tecture with minimum 200-year lifespans.

Exterior

Scaffold growth must follow the standard Biotecture Association guidelines, and be appropriate to the site's existing chemical composition. We welcome novel design through algochemical growth patterns,[1] including derivatives of the *GaudianForm* and *HaeckelLine* sequences. Whilst any infill organisms applied to auto-maintain external surfaces are expected to meet current human and chimera compatibility guidelines, the number of approved species you can use is unlimited. Please note the site has a restricted preformed foundation build ratio of 1:10.

Fig 1 - Interior Specifications.

Interior

Proposals must demonstrate experience and competence in delivering all interior finishes, including details of fluidic specialists and chemo-botanists within, or external to, the team. Finishes and Ectoderms should include but not be limited to *SynthStone, RugWood, SleepSpread*s, BioSilicone morphers, and Limelighting (*Renthouse* suites only). [Fig 1]

Interfaces

Planning must incorporate individual and stack-wide BBTP[2] bio-data control interfaces for all external foramen and internal orifice access points, nervous system audio management, surface and texture longevity, and biochemical lighting. All interfaces must integrate with the maintenance systems.

Maintenance

Programmes must plan for short, medium (25 years) and long-term (200 years) maintenance. We expect emergent behaviour psychologists to be consulted on stack psychological welfare for all aspects of the growth and build, with a minimum 20-year contract. Preference will be given to proposals incorporating energy harvesting systems and AI monitoring of structure agglutination and mutation rates.

Eligibility

We are seeking design proposals from biotect interdisciplinary teams with previous experience of delivering highly visual, low enviro-impact terra-formed structures. Your interior bio-design specialists will manage and cultivate the stack's internal habitats. Rodentia Rise LBI is an equal opportunities employer. Partners must comply with BioArchitecture Registration Body (BARB) regulations of at least 50% chimera workforce, with decentralised gov. AI[3] finance and production management. Preference will be given to contractors employing homeotic gene manipulations for rapid physical evolution (subject to NMR 491c legislation) for naturally divergent structures. All our NMR DNA is from government registered breeders who maintain free-range colonies.

Item Name	Description
BioSilicone morpher	BioSilicone is a DNA edited mineral with organic properties. A morpher is a responsive type which reads biodata and adapts accordingly.
FeedTube	Kitchen equipment supplied in all apartments in a stack, FeedTubes dispense nutrition from a variety of tubes linked to central supplies. More advanced versions assess user biodata and dispense exact nutritional requirements to the resident.
Limelighting	A method of bright white light production from the heating of limestone. One of the few remaining handcrafts, as the highly desirable intricate light patterns have yet to be grown organically.
PulseBag	Object loosely filled with dried pulses for sitting on, favoured by kids. Considered very retro but making a come-back as they can be recycled in FeedTube systems when discarded.
SleepSpreads	Liquid coatings for sleeping areas which mould to scaffolds and semi-solidify to create soft sleeping areas. The advanced SleepSpreads can be infused with superparabiomagnetic properties that enable them to wrap around the sleeper.
SpongeSoft	Retro seating pods made from modified sea sponges, phased out due to the speed of deterioration and difficulty of recycling. Use sparingly.
SynthStones	Modified stoneware that have controllable growth and morphing properties and audio effects. Newer models have environmental biodata interfaces. For internal and external use.

Submission
All expressions of interest should be submitted to [CONTACT] no later than [DATE].

Part B: A Resident's Tale–Chaffinch's Penchant
The apartment vet stood up after removing his shoes and stepped through the orifice into Riya's Nest. He was a stunning chimera – at least 0.5% naked mole-rat with possibly a touch of olm, maybe even lobster. Wow. His skin was smooth and elegantly draped at the jaw and neck, his head mostly hairless. A hypnotic youthfulness seemed to exude from his small black eyes. Riya wondered how old he actually was – hard to tell with the advanced CRISPR'd population. These modified folk varied from the semi-tragic DIY cases to highly advanced and subtle, and the vet was definitely the latter. She flushed noticeably.

"Hi, I'm Riya."

"Good to meet you Riya. I'm Doctor Faulkes Fukopanya, the stack vet for Rodentia Rise."

Chaffinch's tongue was furiously licking the vet's ankles.

"Please excuse Chaffinch, he's anosmic and licks his way through life. Stop it Chaffy! Sorry, come on in."

Faulkes peered down at the animal with unexpected affection. He'd never seen such a giant variety. He shuffled his feet, leaving Chaffinch to lick the floor where he'd been standing.

"You said in your message that you think your Permarat Nest is prematurely mutating. Can I take a look?"

"Yes. A few weeks ago Chaffinch developed an intense penchant for licking the Nest walls. He's never done it before, and now he won't stop. The smell from the SleepRoom has gradually become unbearable, a kind of rancid forest smell. It's pretty gross and it gets worse after the Perma's been in meditation mode. Let me show you…"

They stepped into the verdant living area, as the main orifice contracted behind them. Riya's choice of wall texture was from the Heritage Lichen Ectoderm Collection, a fuzzy coating in a soft warm green with a seasonal hue shift. She always picked interiors that required minimal upkeep, mostly ones with superior DNA sequences from imported succulents.

"I see you still have the original FeedTube system. I'm astonished it still works! Most Nests have evolved theirs by now to get a variety of extra flavours..." Faulkes stopped, aware that his enthusiasm for the retro kitchen had not come out tactfully. "But this is a beauty, I can see the appeal. Could I..."

Riya had already pulled one of the dark fluid tubes out, and was holding it over a cup. The tea trickled out until she tipped the tube upwards causing it to stop dispensing and suck back into the wall. She passed the cup to Faulkes, who immediately sniffed it and took a sip.
"Ahh, it certainly brings back memories! I do miss original tea – my FeedTube bacteria don't ferment it the same way now. Are the food tubes also in good order?"

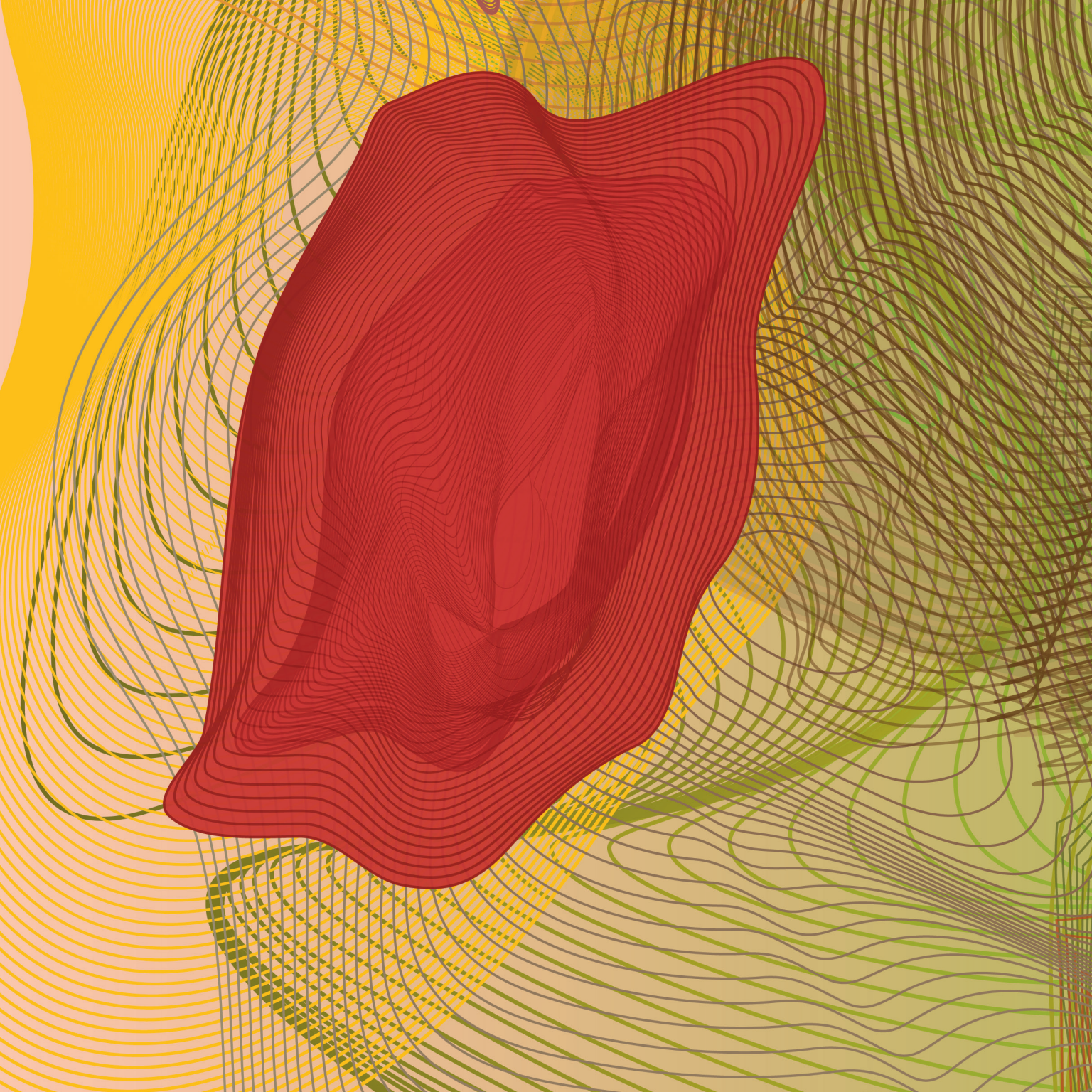
"Yeah. I get about five or six herb options, and all the veg and pulses. It's enough for me—I'm no great foodie."

It was obvious to Faulkes that Riya couldn't afford the genetic upgrades for her Nest, and Riya knew he knew. She didn't usually care what visitors thought, but it felt awkward with him. She squashed the feelings.

Faulkes continued his inspection. The SynthStone absorbent floor in the living area was spotless. Its hydrophilic auto-clean properties were clearly intact, and he could see traces of a healthy under-bloom at the edges of the room.

"It blooms often?" Faulkes asked.

"Yes, especially in the spots Chaffinch licks. I love the sound the blooms give off," Riya continued. "It reminds me of mains electricity and masks that damn stack buzz."[4]



They both stared at Chaffinch as he enthusiastically nuzzled and licked the flooring.

"He's such a weirdo!" Riya giggled.

Faulkes made a mental note to input saliva and SynthStone into the research AI back at the lab. As well as SynthStone blooms oscillating audibly between 50 and 60Hz, they add an enchanting glowing ochre lustre to a floor, but they are notoriously fickle and hard to cultivate. If he could guarantee blooming for some of his wealthier clients it could be a nice earner.

The Permarat+ Nests contained larger seating pods than standard ones. The + stood for a pet, so the seating pod had "extra curl-up space". Cute, but honestly Riya could do without the extra pod food cost. Her pod was originally a Level 3 SpongeSoft. Over time, it had almost sagged into a Level 6 PulseBag, though its thick, deep red membrane was intact, so it looked better than it felt. Of all the old things in the flat, the SpongeSoft was the thing she hated most. By now everyone else had a BioSilicone morpher tuned to their Nest environment settings, but the CredBits she earned from her job at the data salon just weren't enough, even with her extra Darknet income.

"I call this my curl-up womb." Riya laughed to cover her embarrassment, but Faulkes wasn't listening. He'd been distracted by the discharge from a nearby orifice, and was waiting for his Clam DNA[5] device to collect a sample.

"How long has this been weeping, Riya?" His serious voice had kicked in, provoking Riya to regain her composure.

"Only since yesterday. It was that that persuaded me to call you."

She put her hand on the biometric plate, and the sleeping room orifice expanded. Inside, the stench was eye-wateringly intense. Chaffinch legged it through the opening to the wall and started licking frantically; it was weirdly intimate to watch. Faulkes winced at the stench and the frenzied licking. They stood and watched and

listened to the lower part of the QuietLime walls blister, weep and wail, neither speaking until their smell receptors adapted.

"I'm glad you called when you did."
Gaining his composure, Faulkes surveyed the space. He was surprisingly excited. The original RugWood flooring was in good shape. He was always charmed by its ageing patina, and this one had evolved an exquisite Escher-like repeat leaf pattern across its grain. And Riya's CotPit was stunning!

"I built it myself from original cuttings, when the developers stunted the growth of the stack. The weave is Incan, merged with my personal data. I convinced the interior fluidics team to flood it with AeroSil SleepSpread, so it's amazingly comfy."

Overly proud, Riya blushed. She should be more careful—Faulkes wasn't the authorities, but he was in a government-issue PermaSuit. Attentively, Chaffinch moved away from the wall and jumped on the CotPit, which seemed to undulate with delight, as if it had heard the compliment.

"It's remarkable," commented Faulkes, and sensing Riya's anxiety, added, "and 100 percent compliant. It's your walls I'm concerned with. The agglutination of the RugWood floor and Lichen walls is mutating at quite some rate. I need to establish why." He scooped a smear of discharge into his Clam, gave Chaffinch a knowing pat, and promptly left for his lab.

"He's a curious fella, isn't he Chaffy?"

Dear Ch. Riya Glaber,

The lab results have confirmed that your apartment needs gene-replacement therapy. Your QuietLime walls have started to rapidly mutate—their longevity gene sequence is being deactivated by the enzymes in your pet chimera's saliva. If the rest of the Nest follows, it could affect the entire stack; we must treat it immediately. I'm recommending the T-873 modified VectorVirus Solution. The treatment is

not cheap, but I'm afraid there is no alternative. However, it appears your pet has some rather interesting 'abilities'. If you bring him to the surgery for an assessment, we can perhaps find a way to come to an agreement regarding your bill.

Dr F. Fukopanya

Sighing, Riya flopped heavily onto her pod and pulled a booze tube down, decanting liquid straight into her mouth. Shit. She more than adored her giant mole-rat; she couldn't live without him or the Darknet CredBits she made from his DNA sales. T-873 treatment was so expensive, and even if she could scrape the payment together, she couldn't reverse what Faulkes witnessed: that the incestuous effect of Chaffy's saliva was catalysing mutations inside the apartment. It was a game-changer for interior biotects. How can she protect him? Chaffinch naively wagged his tail and sniffed at her. Unconditional love.

References

1. Algochemical growth patterns are created using botanic form manipulation via algorithmically generated gene splicing. Examples include patterns inspired by Gaudi and Haeckel.

2. BBTP: bio bit transport protocol, DNA equivalent of HTTP.

3. gov.AI: artificially intelligent government, works alongside the real government but has higher level powers in certain areas including economics and climate.

4. Stack buzz: a fluctuating low frequency hum which the stacks developed and can cause chronic psychological irritation. The source of the sound is unknown.

5. ClamDNA: a living biodevice used for analysing DNA in any substance passed to the Clam. Faulkes' Clam is a rare ancient (over 300 years) and is highly regarded for its historical knowledge.

Author biography

Julie Freeman is an artist exploring the boundaries of biological sciences and technology. She currently works with a colony of naked mole-rats, data, and soft robotics in an attempt to understand the future convergence of the natural world and man-made technology. Her work is at translatingnature.org

Environments of Resistance for Social Individuals

Fosbury Architecture, IT

Abstract

Today the boundaries between public and private vanish until they conflagrate. While home is becoming more and more a place for work and an instrument of subsistence, domesticity invades every field of human activity. Environments of Resistance for Social Individuals is an incremental archive of authentic private spaces (private in the sense of 'deprivation' of a public presence); exceptional pieces of furniture designed with the sole purpose of accommodating the idiosyncrasies of their occupants.

Fig 1 - Antonello da Messina (1474-1475), San Girolamo nello studio [London, National Gallery].

The most common piece of furniture is the BILLY from IKEA. It is estimated that one is sold every 10 seconds.[1] We often take it for granted that furniture, as much as painting, sculpture, and architecture, reveals the spirit of an era; we even tend to argue that observing how an individual furnishes its own space, for the individual in question, that its character can be identified. So it sounds at the very least strange that a global and irreversible publishing crisis is corresponding to such a frenetic purchasing of bookcases. Since 2012, the IKEA catalogue has become, surpassing the Bible, the most widely distributed publication in the world.[2] Created by 250 specialists and translated into 29 languages, more than 200 million copies are distributed each year. It would be limiting to think that the IKEA catalogue is merely able to capture the taste of the time; it is easier to imagine that it plays an active role in shaping it, seducing us with glossy images of loving parents who smile at their children, blooming cacti, colorful bath mats, scented candles, and improbable lampshades.

Distributed through formidable marketing efforts, amplified by a pervasive internet presence, the low-price and easy-to-assemble Zeitgeist penetrates so deeply into the collective consciousness as to create the illusion that by combining a finite set of objects each individual will be able to produce its own very personal and personalized home environment. A mass hallucination, a powerful instrument of control capable of crossing over the domestic threshold and undermining the radical ambition of the democratization of creativity: reabsorbing it in a boring game of combinatorics.[3]

II

In the current condition of 'commodification of everything' the border between public and private dissolves until it disintegrates. While the home is becoming more and more a place for work and an instrument of subsistence, domesticity invades every field of human activity, with banks that are camouflaged as lounges, offices as game rooms, and restaurants as kitchens. The work/consume/die human

agenda is shifting towards an endless and sneaky productive leisure. The social media has put otium[4] to work 24/7 and the sharing economy, if on the one hand has completely distorted the housing market, on the other has converted intimacy into an economic asset.

The home-sharing platforms have produced and broadcasted an unprecedented physical space, a comfortable, comprehensible, homogeneous and generic geography that allows us to travel from New York to Bali, with stopovers in London and Singapore, without friction. This sterile global landscape is defined by the American freelance journalist Kyle Chayka as AirSpace: "It's the realm of coffee shops, bars, startup offices, and co-live/work spaces that share the same hallmarks everywhere you go: a profusion of symbols of comfort and quality, at least to a certain connoisseurial mindset. Minimalist furniture. Craft beer and avocado toast. Reclaimed wood. Industrial lighting. Cortados. Fast internet. Changing places can be as painless as reloading a website. You might not even realize you're not where you started."[5]

The company that, better than anyone else, has been able to exploit this panorama is Airbnb. The apartments listed on the website, as if we were in a never-ending IKEA showroom, all look alike. In bright and retouched wide-angle photos, everyone seeks to convey a message of warm domestic uniqueness, combining inexpensive wood furniture with personal items that help to win over potential clients. It is a given that goods today serve to sell oneself more than to tell a story about oneself; to feel at home anywhere is possible, after all, it is almost certain that the host and the guest had their home furnished in the same way. Hence, effectively belonging anywhere.

III

This contemporary human retreat towards an ubiquitous and reassuring domestic environment recalls a very similar historical moment, both from a political and a socio-economic point of view: the Biedermeier period. The term (a combination of the adjective bieder, which means simple, integral, honest and Meier, one of the most diffused German surnames)

Fig 2 - (Folllowing spread) - Fosbury Architecture, selection of 32 items from the catalogue Environments of Resistance for Social Individuals, 2017.

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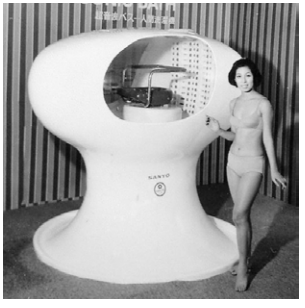
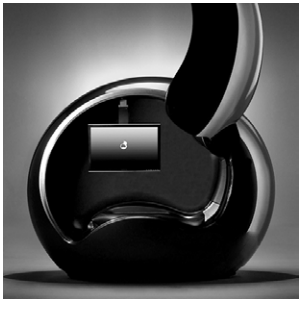
was invented as the name of an imaginary character assumed as representative of the middle bourgeoisie without particular interests except those of preserving his private life and domestic intimacy. A sort of aurea mediocritas,[6] intended to re-establish, in the habits of life and aspirations, in the simplicity of objects and forms, a balance based on rationality and on the positive consideration of what society could afford in a moment of economic contraction. From 1815 to 1848, between the Congress of Vienna and the revolutionary upheavals that shook the whole of Europe, at the dawn of the Second Industrial Revolution, the first and genuine taste born and fed by the bourgeois class was the dominant one. Biedermeier furniture soon invaded Europe and prevailed thanks to the large-scale commercialization, the reduction of production costs, the diffusion of affordable models easily exportable and the invention of product catalogues helping the customers to choose and order. The term that better expresses the atmosphere of this era is Gemütlichkeit, yet another German word to describe a place or a state of warmth and friendship and good humor, comfort, peace of mind, sense of belonging, wellness and social acceptance.

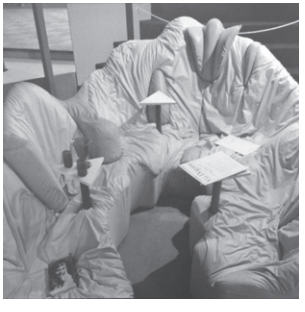
We are not interested in listing all the positive aspects of this period under analysis; instead the aim is to highlight how the need for social inclusion, in fact, contributes to an unprecedented flattening of taste. The sense of bourgeois modesty influenced aristocratic lifestyles and proffered an achievable ambition for the less well-to-do classes. It is at that precise moment that an inexorable erosion of the domestic rituals, peculiar to customs and traditions of each social class, began.

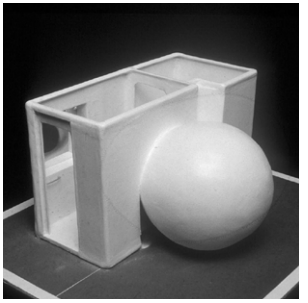
IV

Much like two hundreds years ago, today's recession and growing social control are leading to frustration for political structures. The consequent fear of the speed of life; the impotence towards the global dynamics and the progressive loss of our privacy due to the digitalization of the world once again lead to a tactical withdrawal. Sheltered between our









GNOMO

four solid, shrinking walls (in Great Britain the average home is now just 925 square feet, barely half the size they were a century ago[7]), and assuming we're even fortunate enough to own our house, we discover that the everyday routine has been cut to the bone, and most activities can be carried out elsewhere, or even in the ether. Given a bathroom, a bed, and a computer, the home is now the place to meet friends (Skype), to flirt with one's girlfriend or boyfriend (Facebook), to go to the movies (Netflix), to have sex (Youporn, provided that someone still uses it), to relax if possible.

What is dissolving today are certainly not the objects, which still enjoy excellent health, what we witness is the dematerialized of the domestic liturgy linked to them. The transition is perfectly emphasized by Emilio Ambasz in the catalogue of: "Italy: The New Domestic Landscape" in which there emerges a clear distinction between the Object and its counterpart: the Environment. The Object: "can be stripped of its mystique only if it is tamed, if it is made to assume the role of house pet. Reduced to graspable size, the object no longer intimidates us."[8] Quite the contrary, the Environment is "adaptable enough to permit the enactment of different private and communally imagined new events, but at the same time sufficiently fixed to permit the reenactment of those constant aspects of our individual and social memory."[9] And finally here it is the main difference between the former and the latter: "Once a need or a desire is satisfied, the respective artifact or space that served it begins to undergo a process of stylization. The artifacts, spaces, and ceremonies of the private domain can thus be seen, on the one hand, as directly determined by physiological needs (for example, food), but, on the other hand, they can be seen as icons whose symbolic contents are, in part, intrinsic to them and, in part, culturally assigned as layers of semantic change."[10]

Hard to die, from the Middle Ages the to present, the Environments of Resistance for Social Individuals are exceptional items designed with the sole purpose to accommodate the idiosyncrasies of their occupants. Halfway between an object and a room, their forms are

inspired by architecture. They trigger, preserve and perpetuate rituals.[11] They have tectonic value and not just a descriptive or elegiac one. They contain and do not support. They are anthropometric and not zoomorphic. They are monumental and not atmospheric. They are bulky and not market-friendly. Spaces like the alcove, the studiolo, the boudoir, the pregadio[12] and later the conversation pit, the deprivation tank, the game pod and the peep show cabin, activate a relationship between life and form that is not fulfilled in mere functional terms, but that challenges life to survive under abnormal conditions;[13] without any ambition to change the habits of anyone other than perhaps those who commissioned them. They do not respond to necessity, they deal with desires.

Tomorrow, shifting towards a world that has developed antibodies against the distortions of the Uberisation,[14] all that once was solid will melt into air.[15] In a 3D printable future, the next step of control by the Capital will no longer be the object but the intimate experience. After the adventure packages with bungee jumping included and the trip in the taiga with fat bikes, the new frontier of entertainment will be to live or experience anonymous pieces of life. The Environments of Resistance for Social Individuals will last as the ultimate spatial epitome of anti-commodification: neither sharable nor affordable, but rather an apotropaic waste of energy, resources, space, time and creativity

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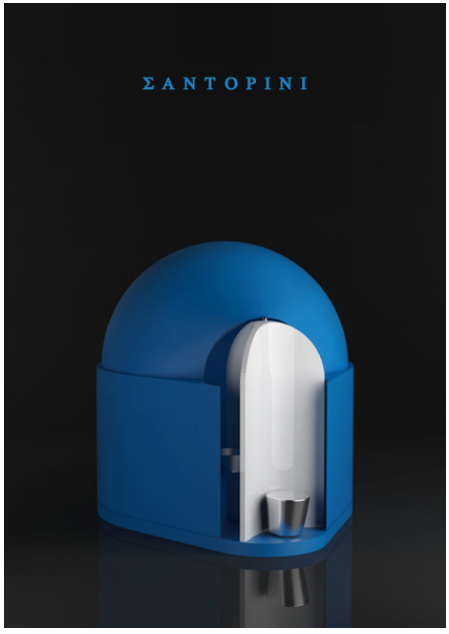
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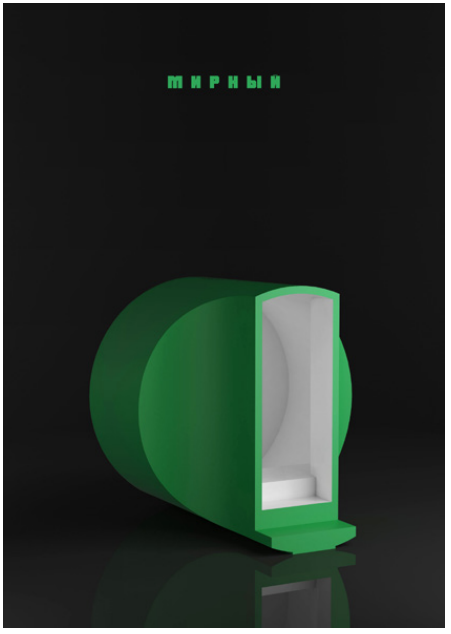
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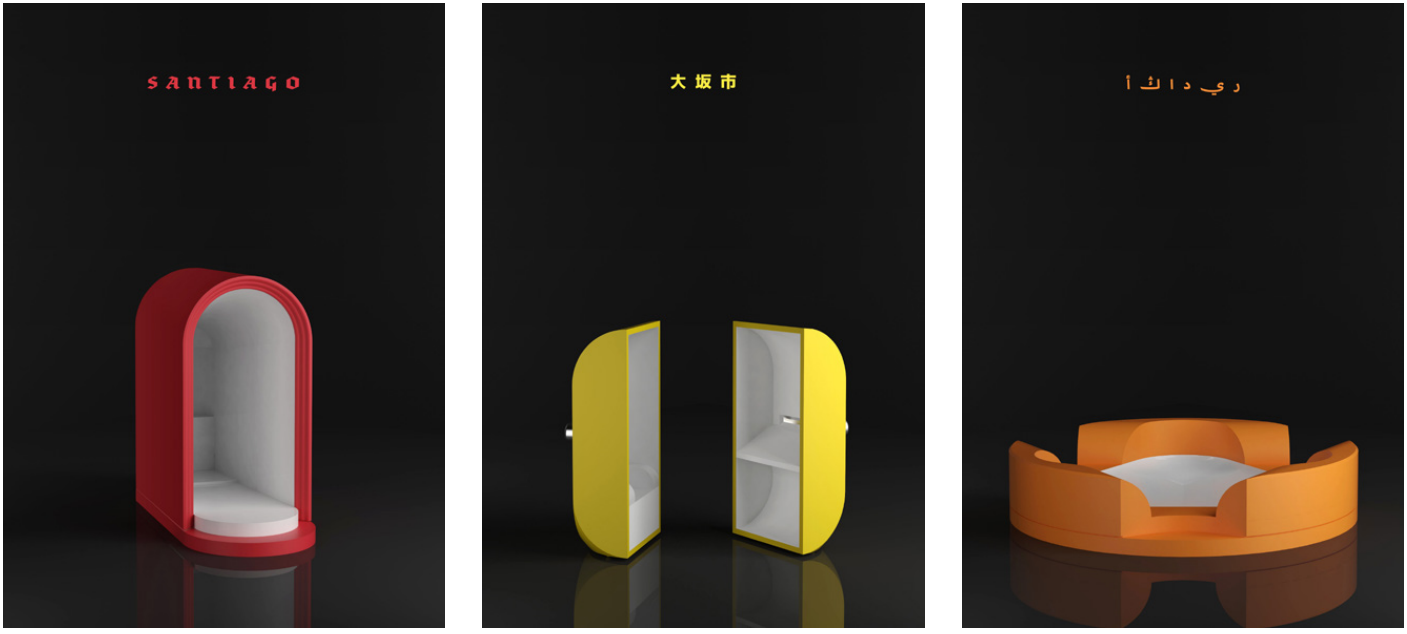
Fig 3 - Fosbury Architecture, Ganzfeld, 2015. From the left: From the left: Santorini #bathunit, Bora Bora #bed, Mirnyj #meditationpod, Santiago #pregadio, Osaka #studypod, Agadir #conversationpit



3. See the Tumblr called Modern Life Space by Laurel Schwulst: artist, graphic designer, and programmer living in New York. In 2011 she started collecting images from apartments listed in Airbnb to find inspiration for her own apartment. Soon after she discovered that what seemed to be about real people and authenticity, had nothing to do with it.

4. From the Latin, the term refers to a precise part of the daily routine free from the occupations of political life and public affairs (negotia), which could be dedicated to the care of the house, the gardening or to the studies.

5. Kyle Chayka, Welcome to AirSpace. How Silicon Valley Helps Spread the Same Sterile Aesthetic Across the World (2016, August 3). Retrieved from https://www.theverge.com/2016/8/3/12325104/airbnb-aesthetic-global-minimalism-startup gentrification.

6. From the Latin, the term does not have the derogatory value that the word mediocrity has in the current use, but rather as a means of staying in an intermediate position between the excellent and the bad, between the maximum and the minimum, rejecting any excess.

7. Gerry Peev, Martin Robinson, The Incredible Shrinking Houses (2013, August 21). Retrieved from http://www.dailymail.co.uk/news/article-2398714/The-incredible-shrinking-houses-British-homes-built-just-HALF-size-1920s.html.

8. Italy: the New Domestic Landscape. Achievements and Problems of Italian Design, ed. by Emilio Ambasz (New York: Museum of Modern Art, 1972), p. 20.

9. Ibid, p. 139.

10. Ibid, p. 145.

11. The Study or Cabinet is a private room or space, typical of the Italian Renaissance, where the owner could retire to devote himself to his cultural interests. It hosted extraordinary collections of art and rare objects. Among the

most famous is the Studiolo of Federico da Montefelto in Urbino (Italy) and the Studiolo of Isabella d'Este in Mantua (Italy).

12. Also known as prie-dieu, it is a type of kneeler primarily intended for private devotional use. In some cases, it became a proper private space where to retire in solitary prayer. Among the most famous is the Pregadio by Pietro Piffetti in the Queen's Apartament, Palazzina di Caccia di Stupinigi, Turin (Italy).

13. See the description of Absalon's series of videos, entitled Solutions, in which he filmed himself trying to inhabit one of his prototype in: Pier Vittorio Aureli, Less is Enough. On Architecture and Asceticism (Moscow: Streak Press, 2013), Ch. 7.

14. The term is derived from the company Uber Technologies Inc. It means an economic system where members exchange under-utilized assets or human resources while incurring only low transaction costs.

15. Paraphrasing the title of the book by Marshall Berman, All That Is Solid Melts Into Air (New York: Simon & Schuster, Inc., 1982).

Author biography

Fosbury Architecture is a collective of research and design based in Milan and Rotterdam. F.A. received awards in international competitions (European 13/NL 2015, Turin 2015, Milan 2015, Bologna 2014, Porto 2013, Tallinn 2013) and took part in collective exhibitions (Chicago Architecture Biennial 2017, Milan Design Week 2017, Rome 2017, New York 2016, Venice Biennale 2016, Athens 2015). F.A. is curator of "Incompiuto -The Birth of a Style" and it was editor of "Rroark!", an independent journal printed in 25, 000 copies.

Aural Utopia

Patrick Macklin
The Glasgow School of Art, UK

Abstract

This chapter explores impacts of design decisions on people, how they live, and how they create communities. It adopts a speculative approach to defining the identity of a neighborhood over a brief period in its existence, and reflects on ways that the residents of that community may shape their futures.

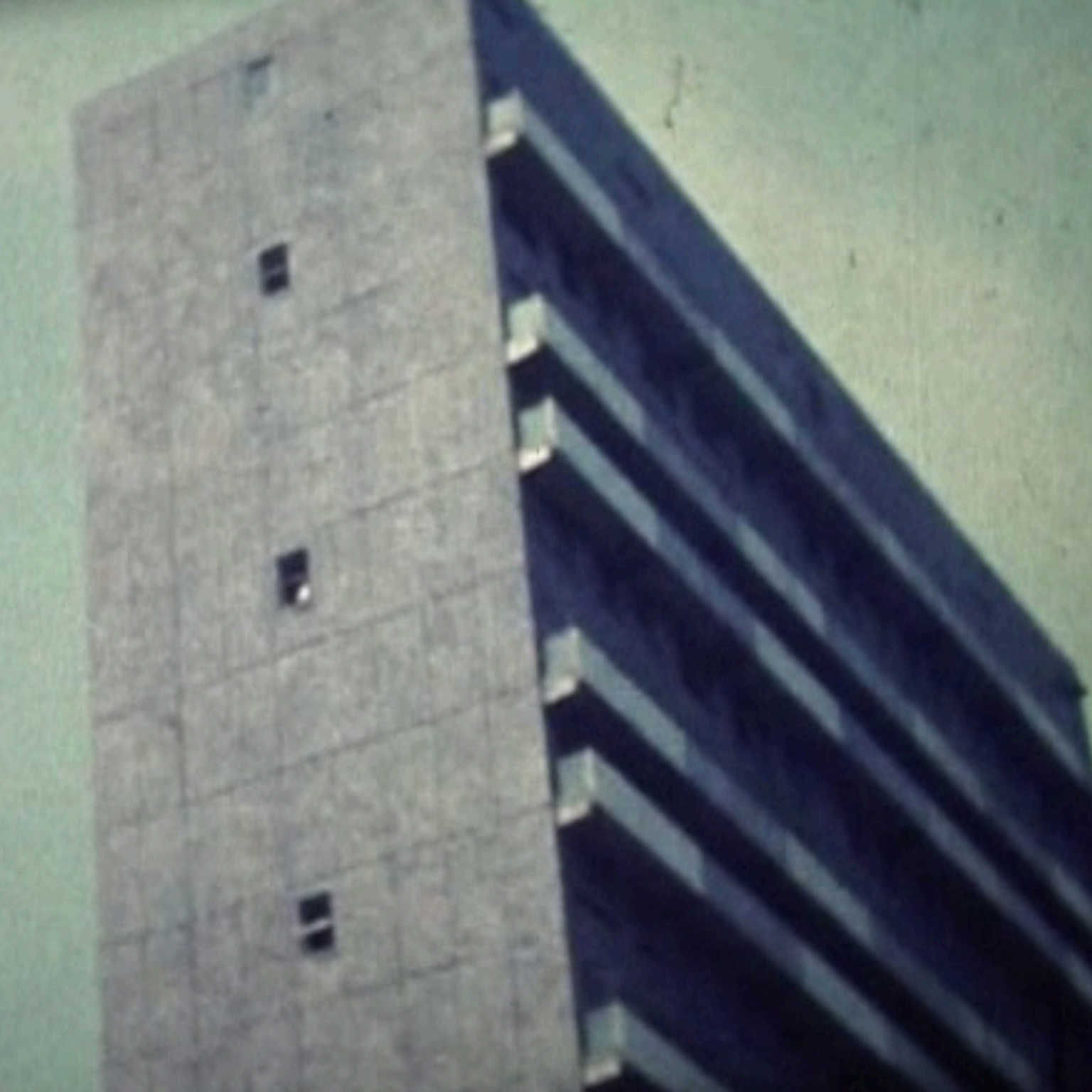


Fig 1 - Cedar Court, circa 1967, Super 8 still, M. McConville.

This piece begins with an echo of an earlier narrative,[1] (re)setting the scene within a then relatively recently constructed multi-storey block of flats in the Woodside area of Glasgow. From there it proceeds to speculate on the future of renegotiating the utopian promise of high density living within ever-changing social, legislative and technical landscapes. The windows are open, as if the room had cupped itself towards the neighbouring clang and clatter of construction and crumple of demolition. The windows are closed, the room reverberates to the sounds of Johnny Cash and a kettle whistling; the sound of Celtic versus Ajax; the sound of playing cards being shuffled; the sound of coins in a saucer. The windows open again, rubber radials rasp on tarmac, wave upon wave of vehicles thrumming into the distance below, glistening tyres slicing through surface water, the drone of engines, each instance merging into a soothing blanket of pink noise, modulated, complex Doppler effects, resoundingly hypnotic. Then the windows are closed, for the night. The kettle clicks off and abruptly the turntables' tone-arm returns to rest in the groove of a seven-inch vinyl disc, the track it carries is "V-2 Schneider" the flip-side of Bowie's *Heroes*, its title is a composite containing both the name of a musician and the name of an unpiloted rocket, thus it simultaneously offers an homage to technologically mediated creation and destruction; to sound, then silence, then back to sound again.

A window has been left open, things are still, save for the whistling and wailing of the wind as it rushes through the internal stairwells and across the communal drying areas, it is occasionally accompanied by the distant chiming of tin-cans careering off of the sides of the waste disposal chutes and raining into the bin store at the base of the block. There are remote echoing voices chattering and shouting, there's laughter too. It is Tuesday, the second of the month, so the air is heavy with aromas emanating from the brewery on an adjacent hill. The breeze carries thick, yeast-laden vapours through the vented escape stairs, percolating into the circulation spaces, corridors and ramps. We are over eighteen

Fig 2 - Woodside-Multi's from the Reid Building at The Glasgow School of Art (2017), P. Macklin.

metres from the ground and everything inside the tower is stable.

In the apartment itself is the sound of drums relayed by tinny speakers. That *Maserati* performance, the mesmerising one, in the basement, with Jerry Fuchs centre stage, in a place, thousands of miles away, from a performance that took place many years ago. The clip is viewed repeatedly, re-played, re-posted, re-framed. Clicks and taps, live edits, and all the while the rice steamer is spluttering, the tomatoes on the veranda are ripening and rain is tapping out its own furious rhythms on the window panes.

The tower was originally constructed as a consequence of the part of the city it occupied being designated a Comprehensive Development Area (CDA):[2] Comprehensive development, or what later appeared to be the wholesale destruction of a community. The block had its fiftieth anniversary several years ago. At that time it enjoyed an extensive refurbishment, the installation of new, silent and reliable lifts that stopped on every floor; extended balconies; enhanced thermal efficiency, but nothing on the scale that was to follow. Through now triple-glazed window units the rig is visible. It was an emergency addition to the block, and has come to serve as a sky-garden, a street, and a means of escape. It has revolutionised ways of living by offering significant additional space to every apartment, the exact equivalent of each homes interior footprint, but on the outside, and in most cases, high off of the ground. It is magnificent. On it are real flowers, cascading everywhere over the balustrades, inside, there are flowers too: they're even better than real. Heavy, pale roses and peony, petals weighed down, always beautifully lit and in the residents favourite colours. They adorn the walls and upholstery. The blooms move slowly, imperceptibly, in loops, swaying at a snail's pace, in some silent breeze. This week it might be decorative motifs that are in vogue, next week, being mid-winter, the trend might be to opt for something more subdued, geometric interpretations follow, then randomly generated forms, perhaps created by

someone in a similar building, in another part of the world.

Drones deliver everything, of varying sizes and capacities, each with its own unique silhouette, they land on the exoskeletal service rig that now encapsulates the tower. Each level of the building has a dedicated perimeter platform with localised bays enabling the vehicles to dock and distribute their cargo, which consists of everything: groceries and musical instruments; books and medical supplies; clothing and bartered items. In between sorties they hover around the place in flocks, like birds, vast clouds formed from hundreds of dark silhouettes with uniform trajectories waltzing across the sky, visible from the duplex. Like the electric, self-driving cars and trucks that speed bumper to bumper along the motorway at the base of the block they are almost silent devices, which is just as well as they constantly criss-cross the city skyline preparing to encircle and lock into their destinations. Occasionally one will peel-off en route, jettison its payload, then rejoin the throng. They cast their own particular shadows that dance over walls and across ceilings and floors. Some people love shopping, some people love sharing and both have become spectacular.

Since the event, the room is a little smaller. It is protected, insulated with a skin is that is one hundred and fifty millimetres thick and is wrapped around every surface of the space. The lining is a fibre insulating batt that carries all of the cables, ducts and conduit that service the technologies, screens and speakers that have been bonded to its surface. They are flexible and high definition–there are rumours that the next series of updates will offer haptic resistance, precipitating a flocking revival, a kind of Digiglypta. It will be possible to recreate the octagonal chartreuse velvet-lined chambers at Château de Chenonceau as if straddling the Loire or the bunker-like scraped plaster and flyer pasted walls of The Milestone Club. Anything is possible. Simply scan, sample, duplicate and repeat or randomize customised decorative systems and at a stroke they are delivered, indistinguishable from the original,

in printed form digitally rendered, decoration both simulated and actual. This second skin has reduced the volume of the room, both arithmetically and acoustically, there is no echo, such acoustically neutrality can assist in simulating the atmosphere and soundscape of other places too. The swaying flowers resonating as if located in the Grosser Musikvereinssaal in Vienna; or geometric lozenges hanging as a backdrop to the rhythms of Tokyo's Womb club, endless varieties of place cascade from within each compartment of the building.

From the heart of this decorative revolution, one that restores craft, revivifies embellished sensory immersion, and ratchets up the significance of new symbolic languages, we pause, lay down our wands, and listen, together, for the murmur of approaching UAV's.[3]

Aural Utopia began with partial recollections of half-remembered events that may have taken place in an apartment within a tower block in Glasgow, one of the few remaining mid-20th century multi-stories that once defined the skyline of the city. From this hazy departure point it pulled focus on the impulse to decorate, and imagined dynamic, augmented approaches to sculpting the formal language of domesticity at some point in the near future.

References

1. The earlier narrative in question is, 'Some Places Where I Spent Some Time/, Interiors: Volume 8, No 1-2 Taylor & Francis, 2017.

2. In the 1950's, in support of attempts to reduce the population of the centre of Glasgow, 29 Comprehensive Development Areas (CDA's) were established. Existing housing stock within the CDA's was demolished, almost entirely, and residents mainly rehoused in replacement multi-storey and deck access blocks or relocated to newly built housing estates created on the perimeter of the city.

3. Unmanned aerial vehicle.

Author biography

Patrick Macklin is Head of the Interior Design Department at The Glasgow School of Art (GSA). He co-founded pop-up innovators Lapland and was an associate artist and designer with the award winning theatre company Suspect Culture. He is co-founder of the design studio SpaceKraft which is interested in the cultural significance of the interior and its emerging possible representations.

Future Tense: Horizontal Inclining Designing

Barry Martin, UK

Abstract

This essay projects a vision of the distant future, the 29th Century, where a humanaut settlement has become established on Trappist 1f, an exoplanet in the Trappist 1 brown-dwarf star system in the constellation of Acquarius, 39 light years from Earth. The humanauts at this time are descendants from Earth's great exodus beginning in 2055 that sought new, habitable and sustainable environments within the known universe. Two main considerations are used, first extrapolating future functions based on our present understanding of Quantum Mechanics, String theory and Nano Technology. Second, the physical, physiological, emotional and psychological changes the humanauts experienced during their long intergalactic journeys.

Fig 1 - Profile Portrait of a Sirius Dog Guard, SDG, 29th. Century, giving protection for Humanaut Settlements. Interior and External Surveillance.

Within the first quarter of the 21st Century scientists discovered that the human form changes when exposed to gravity-free environments in every-day life. This chapter considers how this will impact upon the design of our living environments in outer space, and whether our galactically re-configured forms will necessitate radical changes in the materiality, function and form of our future interiors. It speculates upon the ways in which advances in new and nano-technology might assist 'humanauts' in adapting to these outer-space homesteads.

The Precursors

The evolution towards our humanaut mission began in the late 1950's, when the first ever outer space interior design plans were drawn up - for dogs and monkeys -rather than humans. Taking a leaf from Darwin's directive and looking ahead to the human leaning towards the horizontal, and at its furthest futurist embodiment, morphing into a lizard or crawling, legged formed incarnation, I've envisaged how interior designers may need to tackle designing for the horizontal person, as opposed to the vertically inclined. Russian and American space engineers and designers respectively, were accommodating animals into interiors that could be successfully launched into space, circle the earth and return intact successfully the animals. The stress and ability to survive the conditions of space, electronically monitored, under gravity free conditions.

Kelly Syndrome

Back in 2017, one of a pair of American identical twins – the 'Kellys' returned from the orbiting space station after living there for over a year.[1] The twins were reunited and compared for changes that may have happened to the astronaut's physiognomy, muscle and tissue cell modifications. Placed in profile facing each other, the astronaut had developed a squashed down look with his forehead protruding further forward and chin receded back in comparison. He had also shrunk in height and appeared to have developed a spinal bend giving him an appearance of bending over to the front. In Darwin's theory of evolution it would seem that the human subjected to gravity free conditions

for any length of time develops, generally speaking, from the vertical to the horizontal. The horizontal dog-anaut and crouched over monkey-anaut of those first space travellers perhaps prophetically indicating the bodily direction the human will evolve into once long term outer space habitation is entered into. For example, at simple root level entrances can be smaller and nearer the ground and round, bringing a whole new set of design quotients for door designs. At the other end of the spectrum these future habitations and metropolises will have need of advanced nano-technology, for example, necessitating designers as advanced technocrats and engineers to create, build and service these systems. Nano technology used in 'wall,' roof' and 'floor' construction, enclosures and screening devices, would act as both protection for inhabitants, but unlike the rigidity of earth bound construction materials it will be able to reassemble itself with different configurations of its atoms, from flat to curved, triangular to convex, from concave to conic.

The change of form, shape, and surface will provide multiple choices according to the wishes of its inhabitants. This change of form and surface anticipates a continuing human desire for design being retained and forming part of a cultural expression of the human psyche. Configurations of form and space both inside and outside the future human habitation should also sponsor social discussion and intercourse about ideas of society's integration and future prospects. Changes to the surfaces of each habitat both inside and out through nano-technology would, it is hoped, allow for the transmission of colour surface changes, picturing, news information, and any pictorial function required.

This will also encapsulate virtual reality tripping, with interior surfaces responding to requests for pleasure entertainment, live debate etc. with other space communities. Some of the above has already started, as has the planning for a future exodus from earth to colonise other planets for human occupation.

Within a hypothetical projection into the far

distant future of the twenty-ninth century, Interior Design will be required when considering human settlements on exo-planets, trillions of miles away from planet earth. It would be impossible to visualise and predict the many unknown predicaments that would befall such habitations and to anticipate what kinds of combative, specialist and contingency design features will need to be realised at those future times of confrontation, particularly when hostile environments and fragile sustainability are likely to be pressing concerns. I have therefore looked at two specific areas of habitation, the first being the general and transformable main living area and the second the interior swimming pool.

In early Greek, Egyptian and Roman times the interior pool served a dual purpose, one that was recognised to become of quintessential importance for future humanaut societies and their inhabitants well-being. Whilst the interior pool extolled all the sensory virtues that the planets had to offer, through stone, air, and water it also combined the futuristic characteristics that characterised nanotechnology: from amalgamated quantum mechanics to string theory and the kind of physics that black holes eventually divulge. The pool's duality in offering both exercise and cleanliness enhances its use as a social meeting place for family, friends and business. This gives rise to a pluralistic and collective atmosphere imbued with identity and belonging, and proves helpful for those tackling questions of identity that humanauts travelling vast distances and settling in unknown territories are prone to experience. Within the general living area, technology amalgams, offer humanauts the option of instantaneously transforming their interior, including fixtures and fittings, both physically or optically.

Humanauts easily identify with Kelly Syndrome with the female on the left becoming more horizontal and male to the right becoming bent forward, shorter and rounder. They can be seen standing and lounging in the general living room against a backdrop contrived of string theory and black hole technology, creating a dynamic web that is decorative, interactive and informative. The new interior renders static

Fig 2 - Moving Composition for layered, translucent interior surfaces, driven by nano, string theory and Quantum Mechanics, 29th. Century.

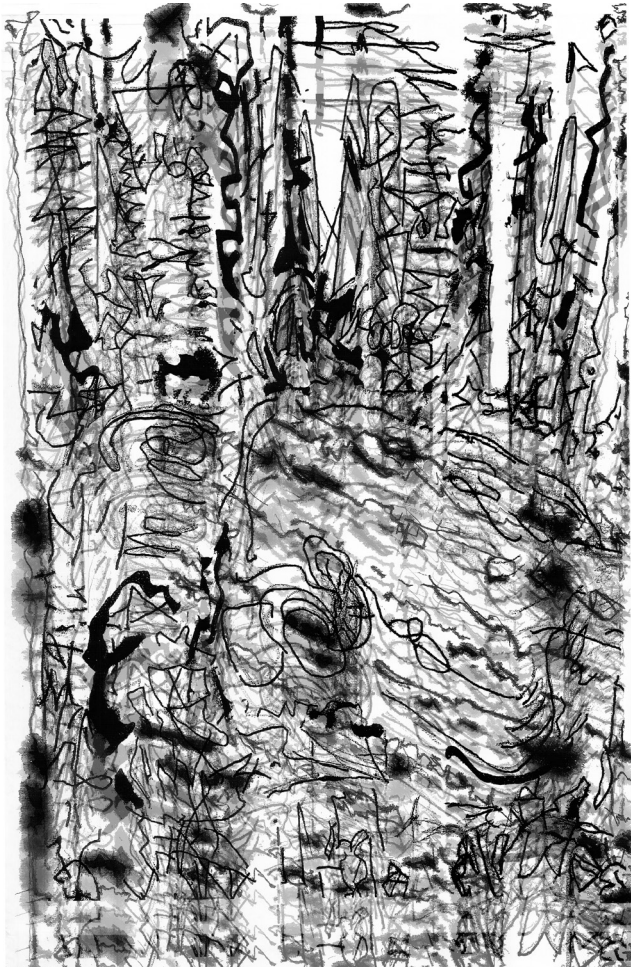
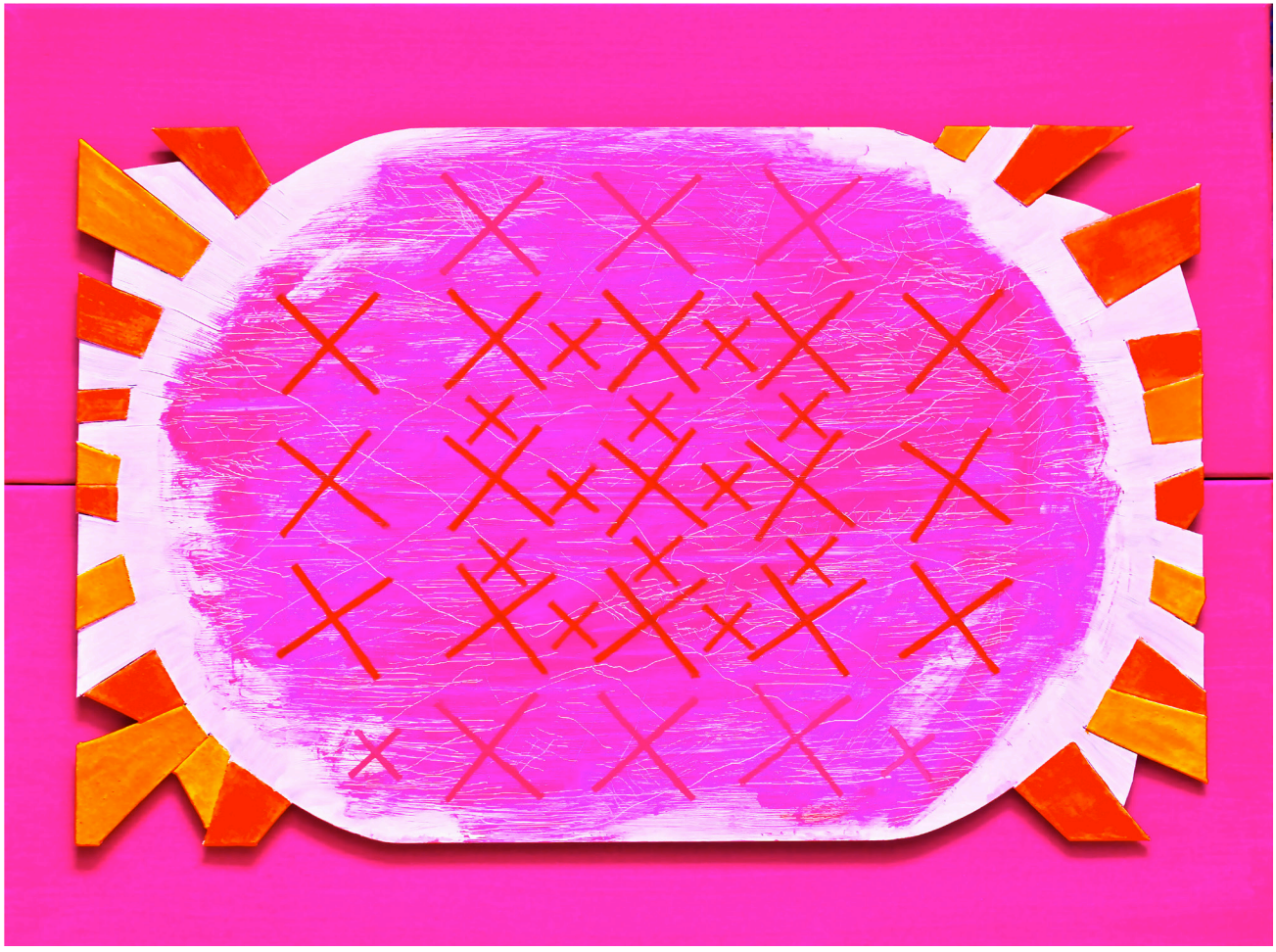


Fig 3 - Top Elevation for Swimming Pool Design, with Star Structures from Local Star Neighbourhoods.



and solid objects such as doors, furniture and tables redundant. Instead, the rigid and heavy materials that once enabled buildings to willfully resist earth's gravity become obsolete. What replaces them are multiple and transformative fluid manifestations that serve to liberate spatial forms, fixtures, and fittings allowing new kinds of domestic environment to emerge. A door is what and when a humanaut decides it to be.The interior pool replaces the hearth as the centre-point of this this environment, offering a kinetic reality where humanauts can touch down, hangout and recuperate without the encumbrance of artificial skins, bodily electronic devices and the systems apparatus used in daily survival. The pool is part imagined, and part constructed from locally sourced materials found on the tidally locked exo-planet Trappist 1f: a red-brown dwarf star planet circling Trappist 1, in the constellation of Aquarius, and 39 light years distant from earth. The pool offers humanaut's a sense of belonging, and the assurance that they are part of their location, it is their home, and not isolated within a hostile urban environment that was their enemy. Instead, the swimming pool is the dove-tail conjoiner between the humanauts emotional and psychological needs of belonging within an extended society and the pressures exerted onto them by the excesses and extremes of the environments they find themselves in.

Humanauts acquire the means to further ameliorate environmental extremes through products available via embedded ubiquitous advertising., The Sirius Dog Guard (SDG) - 'a 'guard dog' for the twenty-ninth century' is highly sought after, and will apprehend, detain or eat any intrusive objects invading the humanoids space. Debris, space fall-outs and robotic cast-offs, represent danger to humanoids. All SDG's are fitted with the latest black-hole disseminator's, which allow them to ingest and then emit the threat as a regurgitated stream of useful molecular packets. These atomic planx discharges can be safely stored and used at a future date as fuel cells. Or, they can provide ambient evening lighting for those quiet nights in.[2]

The question of what constitutes interior design for the future is intimately tied to a synergism of conscious and unconscious expression, capable of undertaking and successfully fulfilling the needs of a highly advanced society placed into precarious locations within our known, and unknown universe. Lying within the pool however, weightless and enveloped in liquid, the humanaut is physically connected and consciously disconnected. For interior design to persist, this duality becomes mandatory.

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1. Source: https://www.nasa.gov/feature/how-stressful-will-a-trip-to-mars-be-on-the-human-body-we-now-have-a-peek-into-what-the-nasa Last accessed 3/03/2018.

2. Contact us at the SDG Shack, Asteroid 9, Belta Quadrant, for more information.

Author biography

Barry Martin is a practicing artist who has exhibited widely and is the artist in residence at Chiswick House, London. His work is in many collections including the Tate Gallery, the Victoria and Albert Museum, and the Government Art Collection. He has taught in many colleges including the RCA, The Slade, Goldsmiths' College and St. Martin's School of Art.

New Trends from Sandy Frank

Christopher Patten, USA

Abstract

New Trends from Sandy Frank seeks to propose a future world in which heightened border security has completely restricted access to cheaply made products: from decorative bric-a-brac and oddly proportioned furniture to vinyl building supplies made accessible in great quantities because of cheap labor in countries like China and Mexico. The chapter suggests via a fictional issue of *Architectural Digest* in 2067 that the loss of access to cheap home goods causes American society to fetishize its suburban past. While highlighting "suburban chic" as the dream of the future ultra-rich, it highlights the concept's striking resemblance to fake historic towns such as Williamsburg or Greenfield Village established by rich industrialists in the late 19th century.

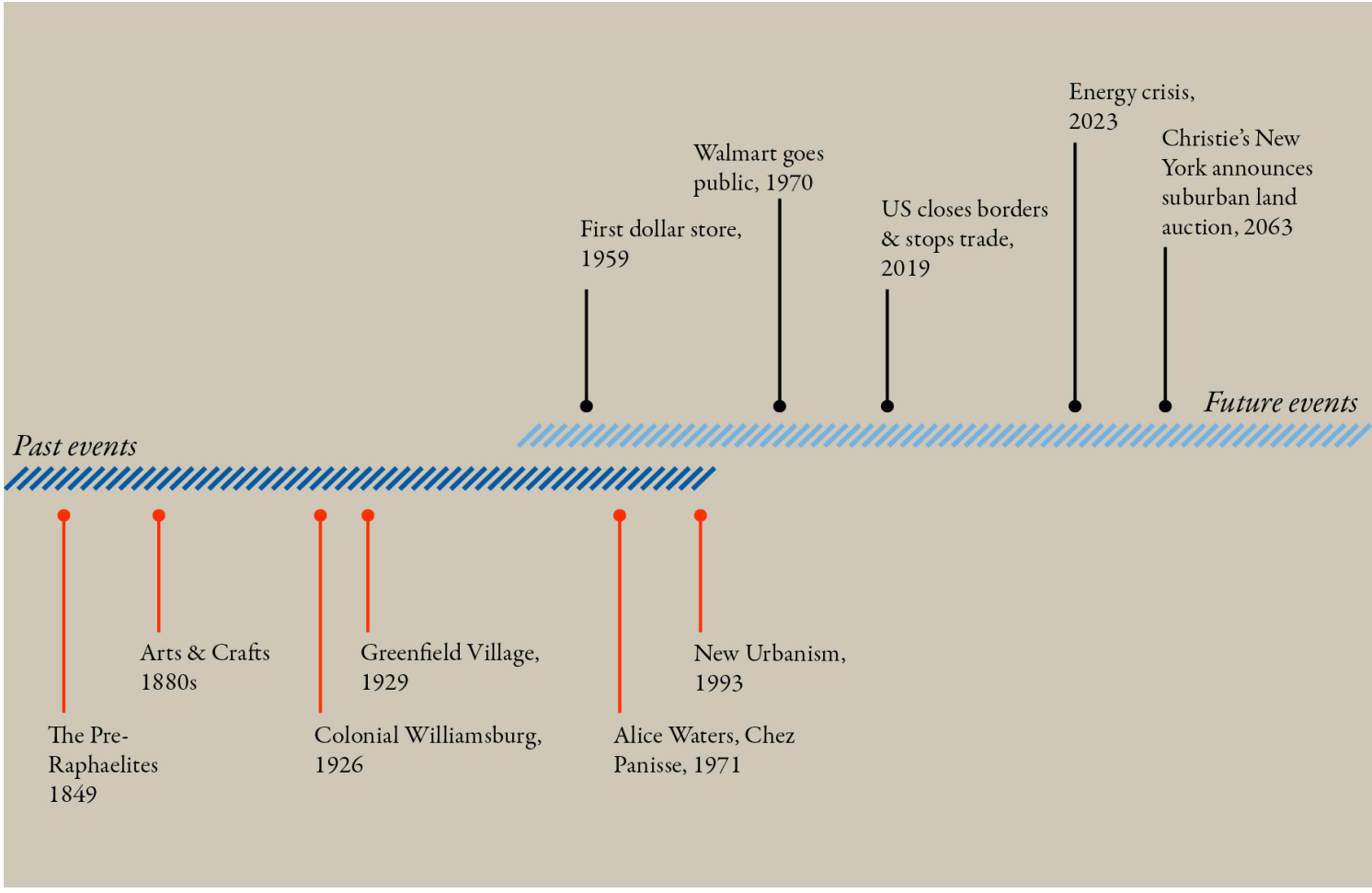
Energy crisis, 2023
Christie's New York announces suburban land auction, 2063
Walmart goes public, 1970
First dollar store, 1959
US closes borders & stops trade, 2019
Future events
Past events
Arts & Crafts 1880s
Greenfield Village, 1929
New Urbanism, 1993
The Pre-Raphaelites 1849
Colonial Williamsburg, 1926
Alice Waters, Chez Panisse, 1971

Fig 1 - Past and Future.

Dearborn, Michigan is home to the largest Arab population outside the Arab world, but in the middle of Lebanese-owned restaurants and delis, a series of iron gates and brick columns mark the entrance to Greenfield Village, Henry Ford's collection of relocated homes, railroad cars, and factories that, as Ford said, "reconstruct as nearly as possible the conditions under which [our ancestors] lived." Inside, actors dressed in period clothes appear at the doorsteps of historic homes and shops while carriages and Model-Ts[1] whiz along streets with names like Main Street and Chapel Lane. Visitors hurry in to see Henry Ford's boyhood home, partially original and partially reconstructed – down to the china and cookware his mother used for family meals. At the same time Ford began his Greenfield Village, John D. Rockefeller, Jr. began his Colonial Williamsburg. The impetus was similar: a changing world left people to romanticize the past. Those who could afford it used these projects as ways to escape the present. This theme is not one of the 1920s alone, but rather one that has repeated over time. The worldwide Arts and Crafts movement, the philosophy of the Pre-Raphaelites, and more recently the New Urbanist development and today's farm-to-table organic food frenzy are all examples [Fig 1] of ways we romanticize and, in some cases, fetishize the past.

New Trends from Sandy Frank argues that this human longing for the past will not go away. But while the last 200 years or so has had us longing for a preindustrial past, the future will cause us to long for a globalized world that no longer exists. According to the International Monetary Fund, (IMF) "one important entity—sovereign governments—should not be overlooked. They still have the power to erect significant obstacles to globalization, ranging from trade tariffs and immigration restrictions to military hostilities."[2] Countless nationalist movements (Marine LePen in France, Geert Wilders in the Netherlands, Donald Trump in the United States, to name a few) have prompted many journalists to predict a decline in many of the ideals a global community works towards.[3]

Fig 2 - United States-based pop interior design magazine Architectural Digest.

In the 1920s, Ford and Rockefeller mourned the loss of a pre-industrial world, but in the future, we will mourn the loss of a globalized world that allowed people to amass large quantities of affordable goods sold in giant stores like Costco (Global), Castorama (Italy), and others. Preservation movements of the future will protect the large, oddly proportioned homes made of building materials that were also produced globally. Many of these structures, because of their poor construction, will be demolished, leaving the few still standing in high demand.

In New Trends from Sandy Frank, the United States-based pop interior design magazine *Architectural Digest*, once touted on its cover as an "International Design Authority," is now a "National" one. [Fig. 2] The article also predicts a world in which much of the human population will live in cities largely due to the loss of plentiful and cheap fossil fuels as a staple resource for transporting people and goods. While in 2000 it was fashionable for the rich to live in hip, Neoliberal cities, in 2067 it will be a necessity and no luxury at all. Instead, only the very rich will be able afford the resources required for leaving and living outside the dangerous city.

In the article, the fictional trend-setting, star real-estate agent Sandy Frank indicates that those who can afford it began to romanticise a new kind of past: American Suburban Chic, a resource-heavy lifestyle that fetishizes not organic farms or the Renaissance, but giant chain stores and their mass-produced goods. The problem, though, is that none of these goods are available anymore due to the fact that trade has been cut off from the countries that mass-produced these goods.

As a consequence, vinyl fencing sold at Walmart in the 1990s becomes a valuable antique. Nespresso coffee becomes a delicacy from the past, and antiquarians herald the discovery of an unopened box of coffee capsules at estate sales. Overstuffed and strangely proportioned chairs once available in countless quantities from Costco become showpieces in homes of the ultra-

ARCHITECTURAL DIGEST

THE NATIONAL DESIGN AUTHORITY

SEPTEMBER 2067

AD VISITS

SANDY FRANK

AT HOME WITH THE AWARD-WINNING REAL-ESTATE MOGUL

AD + SOTHEBY'S

AUCTIONING OFF THE "GOOD DAYS"

rich, assuming the status of prized art we are familiar with today.

New Trends from Sandy Frank presents a future world in which:

- Cities are inhabited generally by lower classes.
- Globalised culture has deteriorated due to nationalistic trends in individual sovereigns.
- Cheaply produced items such as instant coffee machines and vinyl building materials are highly sought after and become top auction items for dealers like Christies, etc.
- The ultrarich go to great lengths to inhabit and in some cases, recreate suburban living, now resource heavy and expensive to operate.

The following is an article from *Architectural Digest* in the year 206. [Figs 2&3] Chatting with Sandy Frank: Legendary Real Estate Mogul

"It's vintage wrought iron from the days when America had Walmart," said Sandy Frank from the intercom as she buzzed open the gate. After 5 years of extensive restoration, the 10 bedroom/15 bathroom home located in Jupiter, Florida was ready for its debut.

Frank got her start working as a Christie's Real Estate sales assistant in Manhattan in the 2000s. *"It was like mayhem. All the international investors were trying to buy apartments as fast as possible. They were so desperate to get in. That's when I started buying every suburban lot I could find in Florida. People thought I was so dumb. Now my assistant can't handle the calls. People want out."* [4]

"Humans crave human space, and we now have proof that this means green, rolling carpets of lawn, shrubbery, and trees embracing shiny, maintenance-free vinyl homes," says Sandy as she sits in one of her vintage massage chairs. "Just look at the styling of this. Ever since we stopped importing from China it's been impossible to find anything so comfortable.

(See Get The Look section page 47). If you see them in tag sales, swipe them up. They're not going to last long as far as I'm concerned."

Frank's estate is part of an entirely intact neighbourhood conceived in 1998 called The Cove at Whispering Pines. *"The poetry of these names makes my heart melt,"* says Frank. While other properties at The Cove are painstakingly restored, investors have flocked to the scene and snatched up every available lot. *"We haven't seen sales like this. Jaw dropping! We actually had to intervene with mediators between quarrelling buyers!"* said Sandy in an email just last week. Check out insider photos of *The Cove* on page 33.

But Sandy didn't stop at her own home. The Knoll at Cypress Glade, her latest development scheme on a private island in Lake Michigan,[5] is bound to make some waves. *"I bought the island for a fresh water investment, but that's just the beginning. The extreme density and influx of refugees we've experienced in the Midwest during the last 30 years has people yearning for Expedition Chic. These days, if you can afford it, you want space, not density."*

Occupants at The Knoll expect to be moving in next spring, and space they will have. The island was full of petty small lake cottages, and Frank wanted to honour the tradition of Teardowns, a trend of the early 21st Century that involved levelling an existing home in order to fill the lot entirely with a new home, often tripling the square footage. Frank organized Teardown Performances to allow each future occupant to experience the demolishing of the properties. *"Art Forum came and said it was the most magical thing since Warhol. Of course I knew that all along."* [6]

Frank, who has worked hard to brand "Ford Expedition chic" has indeed started a trend. Everything related to the suburban lifestyle of the early 2000s is now haute. Luxury candle brands are re-creating scents from American Yankee Candle Co. (only a memory for some of us), "Saks scents their air with that slightly burned plastic scent we remember from Dollar

Fig 3 -Letter from the Editor.

Stores" and Herman Miller has abandoned their Eames collection and focused on reproductions of classic vinyl lawn furniture sold years ago by Kmart under the Martha Stewart name.

"I saw this all coming," says Frank. "We never really were able to understand that Lower Manhattan never came back after the attacks -- and that this was the beginning of the end. It was the canary in the coalmine that nobody listened to. Even for those of us that have penthouse views, those of us who can afford it abandon the cramped, dense environments in our cities that force us to constantly struggle for access to limited resources and erratic services."

Residents at *The Knoll* will experience maximum square footage living with interiors curated by legendary interior designer Sam Deforno.

The designer, known for his jaw-dropping work designing the plan for *Tianducheng* [7] and its adjacent French-style amusement park, is perfect for the job. Sam got his start on Youtube in the early 2000s and really made it big after his work designing Donald Trump's expansion of the White House in 2020. His signature touches, including white vinyl finishes on kitchen cabinets and cathedral-style ceilings draped with forest green and burgundy fabrics, provide the backdrop for imitation Baroque-style furniture. *"It's just like the Hobby Lobby* [8] *days. You could furnish an entire home from a mega craft store. And I love all this bigness! It's like I'm working in Dubai again!" Base properties include both interior and exterior pools, hot tubs, home theatre rooms, and 2 bathrooms per bedroom. "Nobody could have imagined this in their cramped New York townhouse,"* says Deforno. *"And the few that are left are practically struggling."* Deforno said as he stepped into his Cadillac Escalade (fitted to imitate real engine sounds and smell like natural gas).

editor's letter

"The two-story arched doorway had immense stature that only true design *cognoscenti* would appreciate. It harkened back to a simpler time, when grass was cut on time and you could drive straight into your garage after a long day at the office -- in exquisite private luxury."
Sandy Frank

When Sandy calls, you pick up the phone. Last March, the go-getting real estate broker who knows a gem when she sees it had news. The Cove at Whispering Oak Pines, an entirely intact gated community from the late 1990s was put up for sale in South Florida. "You should see the powerwashed vinyl fencing around the swimming pools, "It just comes alive!" I finished the call and packed my bag.

On the plane, Kim Kardashian's tweet couldn't have been more timely. "Life was cheaper when we ruled China bitches!!" Her new line of housewares at luxury retailer LVMH Walmart, reminiscent of a simpler time when imports were plenty, has literally vanished from shelves overnight. For the past 5 years the nation's design set has reminisced for the dollar-store chic, but no longer. While at first we were aghast at the idea of closing our borders, now we find new meaning in living American. We have rediscovered our pioneer spirit, seeking open frontiers and outdoor kitchens.

We live in an era when those of us who can afford it abandon cities. Our cities are crowded, dirty places, much of which cannot even function due to constant blackouts and the erratic nature of solar energy.

Style sirens have moved their focus to the American suburb, and for good reason. Americans had it right the first time, it seems. Welcome to our September issue, a special one indeed. *AD*, the premier source for national style, proudly invites you to go ahead and turn the page.

Sam

Samantha Reludle
Editor-in-Chief

Deforno sped away while Frank walked back inside *"I love walking in from the garage. Why use the front door? I'll spoil my white carpet!" giggles Frank. She opened the door as a blast of fresh air conditioning entered the dry-walled room. "Come on in and have a Nespresso."*

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1. Henry Ford's Model T was a highly affordable automobile, the success of which is attributed to the invention of the assembly line and other technologies that allowed mass production to occur.

2. "Globalization: a Brief Overview" International Monetary Fund, May 2008, https://www.imf.org/external/np/exr/ib/2008/053008.

3. Polakow-Suransky, Sasha. "White Nationalism is Destroying the West." The New York Times, October 12, 2017, https://www.nytimes.com/2017/10/12/opinion/sunday/white-nationalism-threat-islam-america.html.

4. While in the early 2000's it became fashionable to live in cities, by 2045 energy crises and rising sea levels began to destroy investments in coastal cities. Residents in Miami and New York rushed to sell properties and reinvest their money into more stable areas. Suburban neighbourhoods suddenly became highly valuable.

5. Lake Michigan and the other four Great Lakes in the United States, make up 21% of the world's fresh water.

6. Sandy Frank, like many successful real estate agents, can coax people into trends and sell futures that don't exist. In this quote, she arrogantly expresses her insider-style knowledge of current trends in culture. This trend will fetishize destruction and celebrate bigness.

7. Tianducheng, a development in China started in 2007, features a replica of the Eiffel Tower and French-style apartment buildings.

8. Hobby Lobby is an American craft store chain infamously known for winning a United States Supreme Court case which established religious freedom rights for businesses.

Author biography

Christopher Patten is a Design Researcher at the Center for Civic Design. As a designer in a government space, he uses design-led research methodologies to improve the election process. He has an MFA in Transdisciplinary Design from Parsons School of Design in New York.

[I; DSW; This is My Space]

Kelly Spanou
Royal College of Art, UK

Abstract

Objects are embedded within our narratives. These narratives are forces of their existence and of the continuous re-negotiation of meanings. The architect's medium is space - the creation of the environmental conditions for human and object inhabitation. In a speculative future where humans and objects are engaged in conversations, how can we design interiors that enable human and objects to share their contested biographies?

I, DSW,[1] was born and raised in New York[2] city in the 50s. For the first years of my life I lived with my parents, C[3] and R.[4] I spent most of my time at home. I remember that it was bright[5] and spacious,[6] with high[7] ceilings, long[8] and narrow[9] corridors, cluttered[10] and dense[11], but always ordered.[12] I recall being surrounded by all sort of tools, equipment and furniture - colours, pens, sketchbooks, rulers, hammers, nails, moulds, fabric, video cameras, wires, plastics, plants, tiger skin rug, shelves, hanging lights, drawings, paintings. This youthful experience shaped the way that I now see the world. This chaotic[13] yet creative[14] environment affected my social[15] behaviour. I learned to surround myself with people. I enjoyed the intimate[16] company of others and being among them made me feel precious[17] and pleasant.[18]

My parents held many aspirations for me, hence I found my first job when I was quite young. I packed everything into a cardboard box and I travelled to work for V.[19] The job transformed my reputation and irreversibly altered my behaviour. Everyone recognises me. I am popular.[20] I've found myself in a variety of interiors: from studios,[21] apartments[22] and luxurious residences[23] to hotels,[24] salons[25] and galleries,[26] in the company of all kinds of different people. I have a very strong[27] memory. I remember every detail. In one instance, I was in a little studio flat that I shared with a couple where I felt very welcome.[28] The couple would spend a lot of time at home and we would eat, drink, and even study together. Sometimes the different activities became tiresome[29], although I can assure you that I definitely preferred these to others. For example, I used to live in a large[30] and luxurious[31] house,[32] which was empty[33] most of the time. Those who came to visit preferred to stay in other rooms[34] and seldom noticed that I was home. I felt abandoned[35] . Later on, I worked in a gallery[36] for a furniture exhibition. I was observed intensively but I was unable[37] to respond. I wanted to interact and communicate.

During my life span, I travelled a lot. I am a voyager.[38] I met a lot of people; users[39], observers,[40] makers,[41] buyers,[42] sellers,[43] but

the longing for a relationship remains. Who would choose to be static[44] without being able to interact? Wouldn't you prefer to converse?

Some years ago, I was unable to talk to you, but I'm now in a position to code my autobiography[45]. I can now tell you that I am a chair.[46]

I am 112 years old. I occupy 0.38595 m2. My colours today, are red,[47] brown[48] and black,[49] and I am made from a combination of fiberglass,[50] aluminium[51] and wood.[52] My height is 83cm and my width 46.5cm. Sometimes I feel big,[53] sometimes small,[54] and others times I feel almost invisible.[55] I am confused when at times I'm used as a table.[56] The way that I experience the world is always related to how I interact with other objects and with people. I can tell you with accuracy that I have been sat on 82,323,343 times. I have been sold 1,899 times and photographed 5,424,272,323 times. I have changed environment 289,321,234 times. 182 people have broken my legs and another 981 have injured my back. I was once close to a fight, and was pushed over and damaged quite badly, requiring surgery. I was copied 55,532 times. My price has changed more than 100 times, from 84 USD (my material cost), to 240 USD (the price that V sold me for). I was once reduced to 7 USD (the price of a ticket to enter the museum). Today you can find me online for 459.70 USD. I have been placed next to 5,344,452,443 objects and I was in contact with 34,323,342,376. 527,342,345 people who disliked me and 5,356,456 people enjoyed me. I estimate around 85,323,342,345 people have looked at me and 10,342,345,728 of these people paid me no attention.

You may still wonder, how I'm able to share this information about my life. I am talking to you from PLOT - The "Platform of the Landscape Of Things."[57] A platform established in 2052. One of the most intelligent story-telling systems of our times. PLOT is responsible for computing my experience and transforming it into a story that I can share with you. To make my point clear, by stories I don't mean tales. There is nothing imaginary here. I am talking about all the events that I have been involved in, and all of

*Fig 1 - Cushioned with bubble wrap. I was squeezed into a box 55*55*69 cm. Narrow and dark. I wished to escape.*

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the people and objects that I have encountered with in my life.

In my case, as a chair and an object, an algorithm organises my experience within a syntax that follows the patterns of human language. With the aid of this syntax, all of the situations that I have experienced are arranged in a sequence. My functional configurations, my usage, my emotions, the personal values, the symbols, and the meanings that I have obtained during my life are exposed within my autobiography. Due to the intervention of PLOT, my stories are now accessible to you. It enables you and I to converse in ways that were impossible in the past. Narratives are often used to describe our relationships. This is how I'm remembered; as an embodied narrative. I have many memories since I have no meaning without them. I would have nothing to tell you without having someone who makes me, observes me, ignores me, uses me, touches me, breaks me, takes photos of me, writes about me, locates me adjacent to other objects and designs spaces for me to be placed in. But now, I can tell my experience and you can see me anew through another point of view. This is my interior space. A flexible space that happens between me and you, every time that we're part of the same narrative. This is the intelligence of PLOT: designed to make our interior space accessible for you by distributing our contested, embodied stories.

FRAGILE
bargainmunt
ITEM: EAMES CHA
QTY. : PCS
N. W. : KGS
G. W. : KGS
MEAS. : 54X46. 5X
COLOR:
Black
Blue
Light blue
Mustard

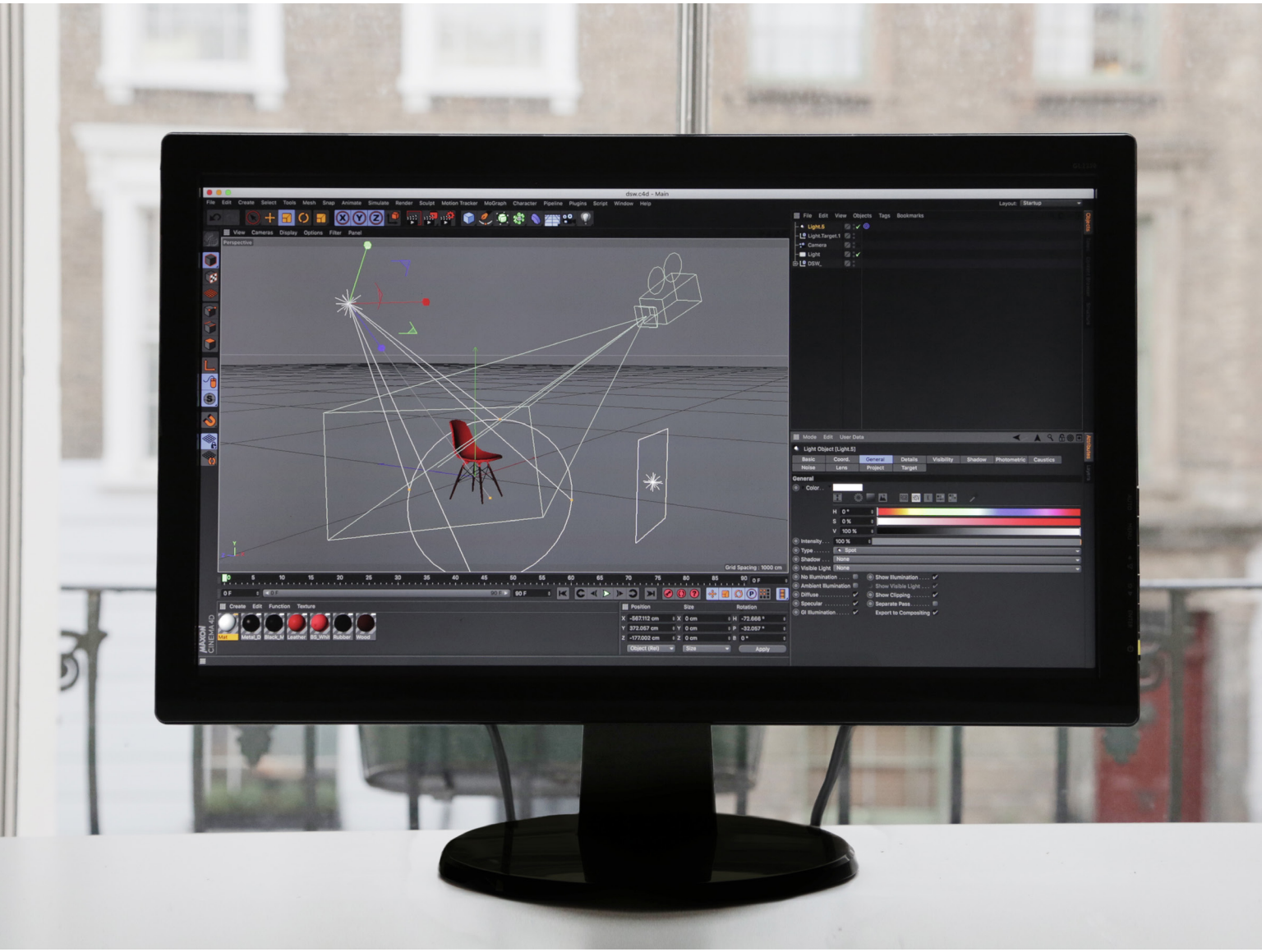

Fig 2 - Placed on an infinite grid. I was constituted from 236 curves, 3422 lines, 8 meshes, 7 materials. A very strong light blinded me, while a camera watched over me. Constantly moved, rotated, scaled, copied and pasted, I have undergone multiple transformations..

References

1. [Name (DSW: narrator)].

2. [Location (New York: 40°3'N to 45°1'N, 71°51'W to 79°46'W] // is a state in the northeastern United States. Total area: 141,300 km2, Width:455 km, Length:530 km)].

3. [Name (C: (1907 –1978) was an American designer, architect and film maker)] .

4. [Name (R: (1912 –1988) was an American artist, designer, and filmmaker)].

5. [Adjective (bright: full of light, shining)].

6. [Adjective (spacious: large and with a lot of space)].

7. [Adjective (high: being a large distance from top to bottom or a long way above the ground, or having the stated distance from top to bottom)].

8. [Adjective (long: continuing for a large amount of time)].

9. [Adjective (narrow: having a small distance from one side to the other, especially in comparison with the length)].

10. [Adjective (cluttered: a lot of objects in a state of being untidy)].

11. [Adjective (dense: having parts that are close together so that it is difficult to go or see through)].

12. [Adjective (ordered: carefully arranged or controlled)].

13. [Adjective (chaotic: in a state of chaos)].

14. [Adjective (creative: producing or using original and unusual ideas)].

15. [Adjective (social: relating to activities in which you meet and spend time with other people and that happen during the time when you are not working)].

Fig 3 - It was the morning of the 1st of December 2017. The sky was clear as I gazed over London from the top of Primrose Hill. Alone, it was a lovely morning.

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16. [Adjective (intimate: having, or being likely to cause, a very close friendship or personal or sexual relationship)].

17. [Adjective (precious: of great value because of being rare, expensive, or important)].

18. [Adjective (pleasant: enjoyable, attractive, friendly, or easy to like)].

19. [Name (V: 47°36'8.14"N, 7°37'0.14"E. V is a Swiss company. It is the manufacturer and seller of the works of many internationally renowned furniture designers)].

20. [Adjective (popular: liked, enjoyed, or supported by many people)].

21. [Noun (studio: a room in which an artist works, especially a painter or photographer)].

22. [Noun (apartment: a set of rooms for living in, especially on one floor of a building)].

23. [Noun (residency: a home)].

24. [Noun (hotel: a building where you pay to have a room to sleep in, and where you can sometimes eat meals)].

25. [Noun (salon: a shop where you can get a particular service, especially connected with beauty or fashion)].

26. [Noun (gallery: a room or building that is used for showing works of art, sometimes so that they can be sold)].

27. [Adjective (strong: powerful; having or using great force or control)].

28. [Adjective (welcome: if someone is welcome, you are pleased when they visit you)].

29. [Adjective (tiresome: annoying and making you lose patience)].

30. [Adjective (large: big in size or amount)].

31. [Adjective (luxurious: very comfortable and expensive)].

32. [Location(London:51°29'48.35"N,0°10'45.17"W, house property)].

33. [Adjective (empty: not containing any things or people)].

34. [Noun (room: a part of the inside of a building that is separated from other parts by walls, floor, and ceiling)].

35. [Adjective (abandoned: left behind, or left without care and protection)].

36. [Location (London: 51°31'9.82"N, 0° 5'38.64"W, exhibition space)].

37. [Adjective (unable: to not be able to do something)].

38. [Noun (voyager: a person who goes on a long and sometimes dangerous journey)].

39. [Noun (user: someone who uses a product, machine, or service)].

40. [Noun (observer: a person who watches what happens but has no active part in it)].

41. [Noun (maker: the people or company that make something)].

42. [Noun (buyer: someone who buys something expensive such as a house)].

43. [Noun (seller: a person who is selling something)].

44. [Adjective (static: staying in one place without moving, or not changing for a long time)].

45. [Noun (autobiography: a book about a person's life, written by that person)].

46. [Noun (chair: a seat for one person that has a back, usually four legs, and sometimes two arms)].

47. [Adjective (red: RGB: 220 52 59)].

48. [Adjective (brown: RGB 157 116 70)].

49. [Adjective (black: RGB 45 41 38)].

50. [Noun (fiberglass: a strong, light material made by twisting together small threads of glass and plastic, used especially for structures such as cars and boats)].

51. [Noun (aluminium: a chemical element that is a light, silver-coloured metal, used especially for making cooking equipment and aircraft parts)].

52. [Noun (wood: a hard substance that forms the branches and trunks of trees and can be used as a building material, for making things, or as a fuel)].

53. [Adjective (big: large in size or amount)]
54. [Adjective (small: little in size or amount when compared with what is typical or average)].

55. [Adjective (invisible: impossible to see)].

56. [Noun (table: a flat surface, usually supported by four legs, used for putting things on)].

57. [Name (PLOT; Platform of the Landscape Of Things: a platform established in 2052. It is mainly used by interior designers in order to allow them to incorporate objects' perspectives into the design process)].

The definitions for all the nouns and adjectives are taken from the Cambridge Dictionary.(http://dictionary.cambridge.org/).

Author biography
Kelly Spanou is an architect and researcher. She currently conducts MPhil/ PhD research - awarded by London Doctoral Design Centre (LDoc AHRC) - in Information Experience Design and Architecture at the Royal College of Art (London). Within her work, she envisions practical creative applications for exhibition settings in museums, employing new forms of storytelling by merging computational environments with physical space.

Functional Obsolescence: Repurposing our Futures

Liz Teston
University of Tennessee, Knoxville

Abstract

Written from the vantage point of 2065, Teston looks at adaptive reuse: a conversion of an obsolete postmodern office tower into a memory-care residence for elderly Millennials. The need for corporate interiors has disintegrated. After the upheaval of orthodox corporate paradigms, have designers negotiated a new foundation for contemporary design? Will this aesthetic micro-evolution integrate both the cultural and technological needs of society? These visions of the future were developed by interior architecture students based at the University of Tennessee.

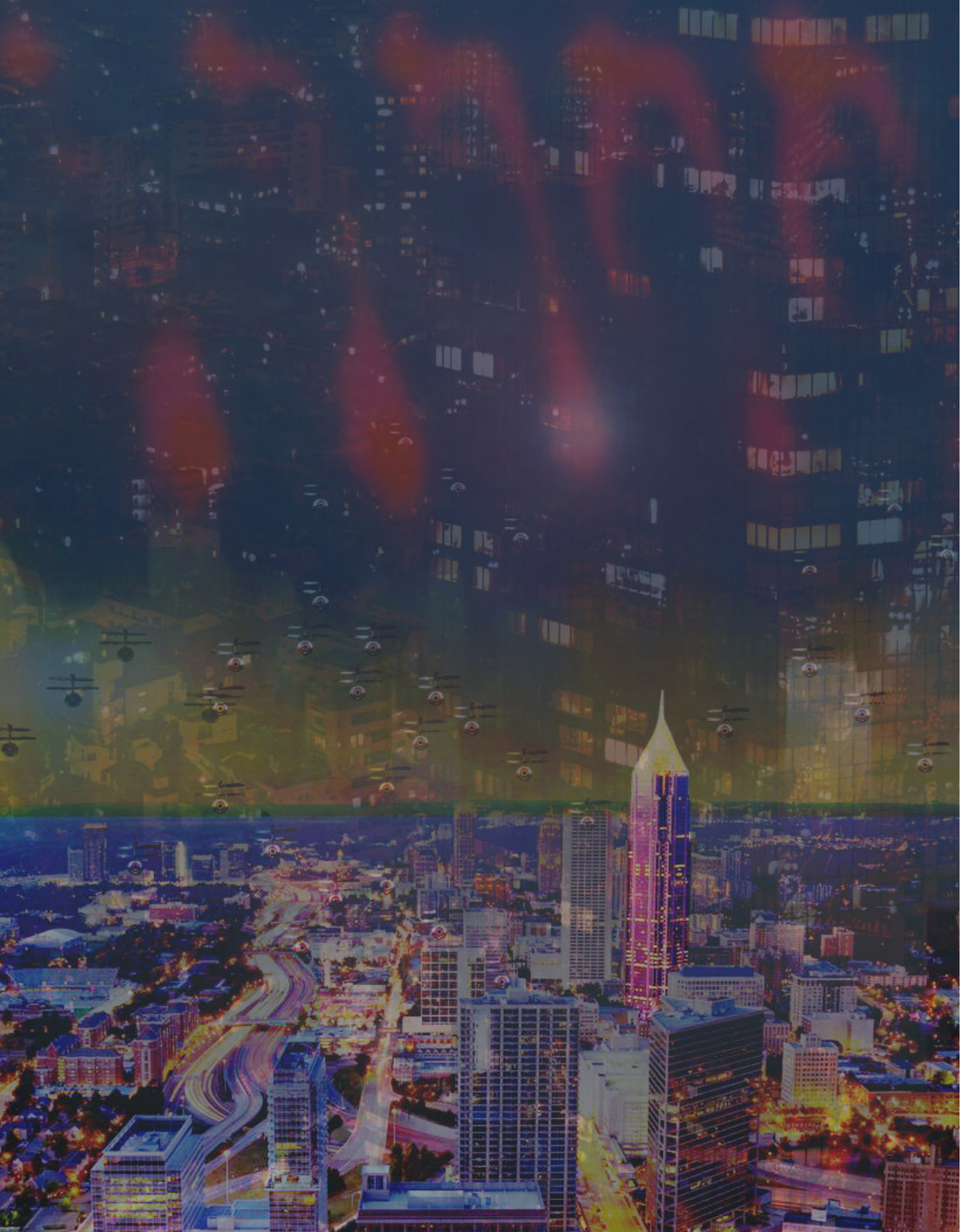

Fig 1 - Bank of America Plaza.

It's 2065 and the millennials are seniors. It's now illegal to demolish existing buildings, yet vacant towers dominate the skyline, embodying the excesses of the previous millennium. With these converging pressures, how can designers re-appropriate high-rises for the common good? This chapter examines incremental epistemological shifts in 2060s design. It also explores the notion that these changes are so deep-seated that they hide in plain sight.

Atlanta's Bank of America Plaza is one of the tallest towers in North America [Fig 1]. For almost six decades, since 2008, the Plaza is typically around 50% let and in disrepair. This extraordinary vacancy rate of approximately 63,234 m2 is attributed to the banking crisis and the obsolescence of corporate real estate due to technological innovation.[1]

The year 2016 kicked all this off with a long phase of misguided renovation projects. Well-meaning property managers re-branded the vacant areas as industrial loft-style offices. All the while, the brass-trimmed atrium still exemplified early 90s extravagance.[2] In the following decades, hasty renovations and declining workplace demands exacerbated the outmodedness of the Plaza. Now, it is time to salvage the Plaza through a tactical approach.

For almost a century, designers transformed obsolete industrial artefacts into housing. In some ways, the adaptation of these warehouses and factories romanticized industrial grit. It whitewashed the post-industrial city, creating an unrecognizable gentrified urbanity.

By 2065 society shuns traditional office settings as relics of an inflexible and patriarchal past. A conscientious adaptive reuse of banal office towers delivers a new paradigm. By re-appropriating former office spaces for inclusive uses, we subvert the profit-driven establishment.

Such reuse nourishes this obsolete tower. It feeds the urban network of interrelated social, political and human conditions. Millennial seniors prefer urban living and designers must

Fig 2

reanimate the city following the fragmentation of corporate real estate. Subsequently, the Plaza is transformed into a Millennial senior memory-care community. Millennials that were born in 1995 are 70 years old in 2026. They are the largest living generation on a planet whose total population is over 10 billion.[3] Back in 2050, an estimated 16 million Americans had Alzheimer's disease. Two-thirds of these were women.[4] As such, pressure for urban memory-care has increased over the last fifteen years.

This sets the stage for a new culture of dwelling, fortified by memories and music. Situated somewhere between the optimistic, real-life world of Molenaar, Bol & VanDillen's Dementia Village and the dystopian, fictive world of Koolhaas' Exodus, people can voluntarily seek refuge in the memory-care tower. The communal interior offers a desirable alternative to solitary living. Residents are able to roam throughout the public spaces of the tower. The interior of the Plaza provides freedom, camaraderie, and protection.

To maintain vitality, the interior offers a variety of public spaces in the senior residences.[5] This includes a music venue, for use by both residents and the public. The venue features the best live music in the region. It brings the city to the interior, creating an infinitely more powerful communal setting. 2065 contemporary design is not overly preoccupied with technology. It focuses on generating a comprehensible spatial framework for living, rather than a fantastical world full of alien apparatuses. Instead, each interior features covertly integrated technology. Although technology shapes our daily lives, longstanding visual cues still drive our environment. Karl Popper's 'understanding of change as an incremental, contingent subversion of the status quo,' has itself become the status quo.[6]

At first glance, the proposed adaptive reuse of the Bank of America Plaza may appear mundane. At first glance, the assemblage of new adjacencies is the most progressive visible design feature. Yet, there are two

Fig 3

hidden components that deviate from design norms in a subversive, negotiated manner.

The first includes music-making screens and activity stations. While verging on the modern aesthetics common to turn of the 21st Century design, in 2065, these screens are known as a proven prescription for dementia. Music intertwines with our identity and reawakens our essential selves. The music of our youth has the power to revive us, and for dementia sufferers, it brings us back to life.[7] The melodic partitions are dispersed throughout the space. They act as acoustic chimes, bringing the outdoor environment to the interior. These interactive elements help to reduce wandering behaviours, a common symptom of dementia.[8] The main circulation will provide access to the musical activity stations and music venues. These spaces will create opportunities for community-resident engagement.

The second space takes researcher Karin Ljubic Fister's pivotal genetic discovery a step further. In 2016, Ljubic Fister established a method for archiving data inside plant DNA. She converted the computer's binary code into DNA's quaternary structure. Through this, she invented a new data storage method. In 2065, one can now 'sit down on a bench, touch a handheld DNA reader to a leaf, and listen to the Rolling Stones directly from it.'[9]

On the surface, the memory-care center appears familiar, yet verdant. Underneath that recognizable surface lies a vast plant-DNA archive of world knowledge. Furthermore, the vegetation stores the memories of the residents. Family members and residents can access memories at any time, by touching a DNA reader to a plant. The memory-garden is a prosthetic, a stand-in for compromised brains. It synthetically restores damaged neurological function. Each resident cultivates a personal memory-garden, sustaining a lifetime of memories. The memory-garden is a physical manifestation of the resident's life. When a resident dies, their family is invited to graft this memory-garden into their own. By tending

these plants, they cultivate and preserve an inter-generational memory archive.

This aesthetic micro-evolution bypasses avant-garde design, embracing incremental changes and contingent subversion as the primary catalysts for contemporary 2065 design. Spatial experiences are entangled with social and political contexts. We challenge traditional world-views by promoting a negotiated condition, and in the end, revise our collective understanding of both space and society. Like cities, people are simultaneously powerful and fraught with profound vulnerabilities. As a result, we become resilient and are the agents of our own destiny. We have the capacity to form and fashion our own memories, music and our interior futures.

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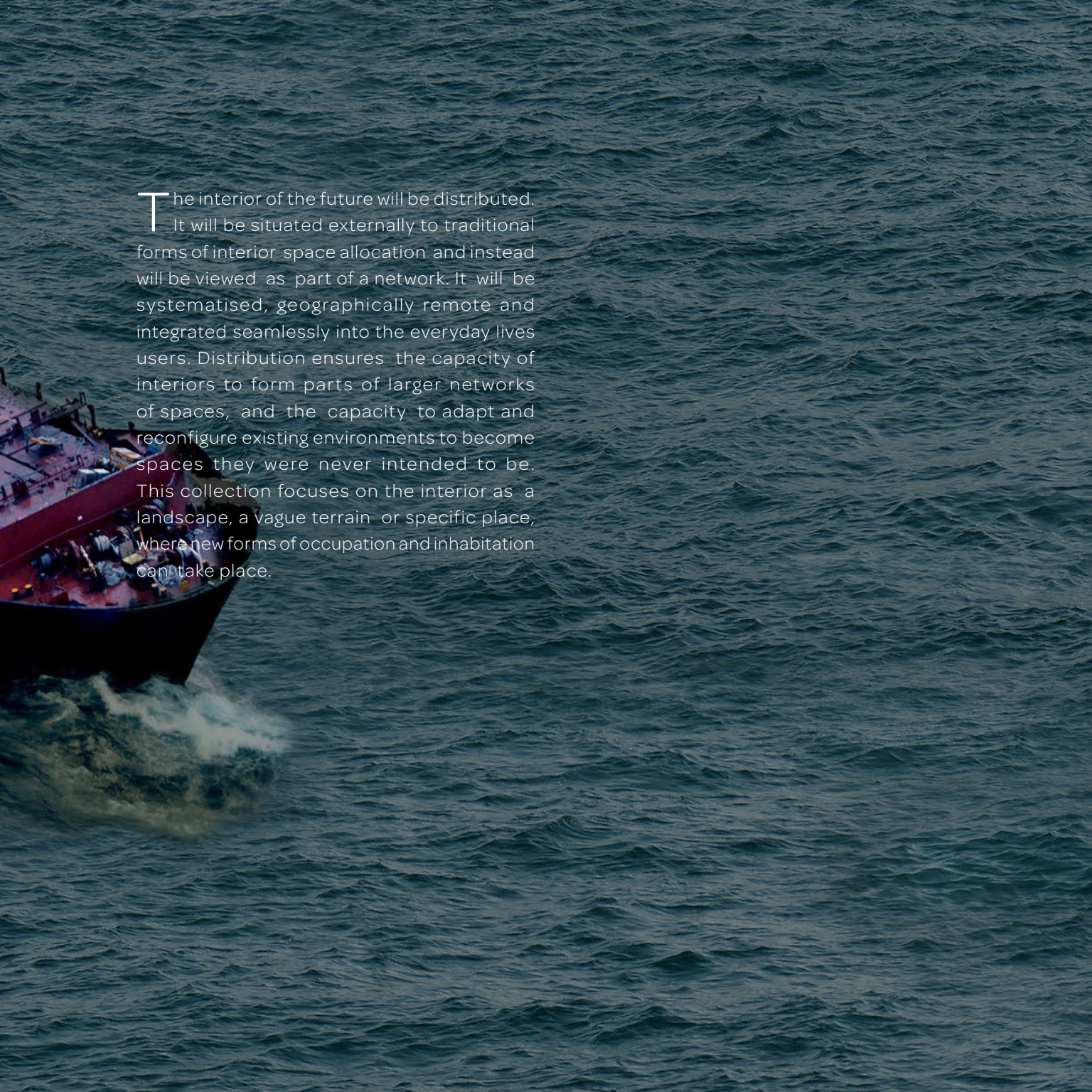
Author biography

Liz Teston is an assistant professor of Interior Architecture at the University of Tennessee, Knoxville. Teston's research focus is urban interiority, design politics and cultural identity. She is the College of Architecture and Design's James Johnson Dudley Faculty Scholar (2017-19) and a Fulbright Grant recipient in Bucharest, Romania (2018). Her recent publications include '...Though She be but Little, She is Fierce!' in *MONU #27* and 'Re:claim the City' in the *International Journal of Interior Architecture + Spatial Design*.



The interior of the future will be distributed. It will be situated externally to traditional forms of interior space allocation and instead will be viewed as part of a network. It will be systematised, geographically remote and integrated seamlessly into the everyday lives users. Distribution ensures the capacity of interiors to form parts of larger networks of spaces, and the capacity to adapt and reconfigure existing environments to become spaces they were never intended to be. This collection focuses on the interior as a landscape, a vague terrain or specific place, where new forms of occupation and inhabitation can take place.

Interior Futures
Distributed

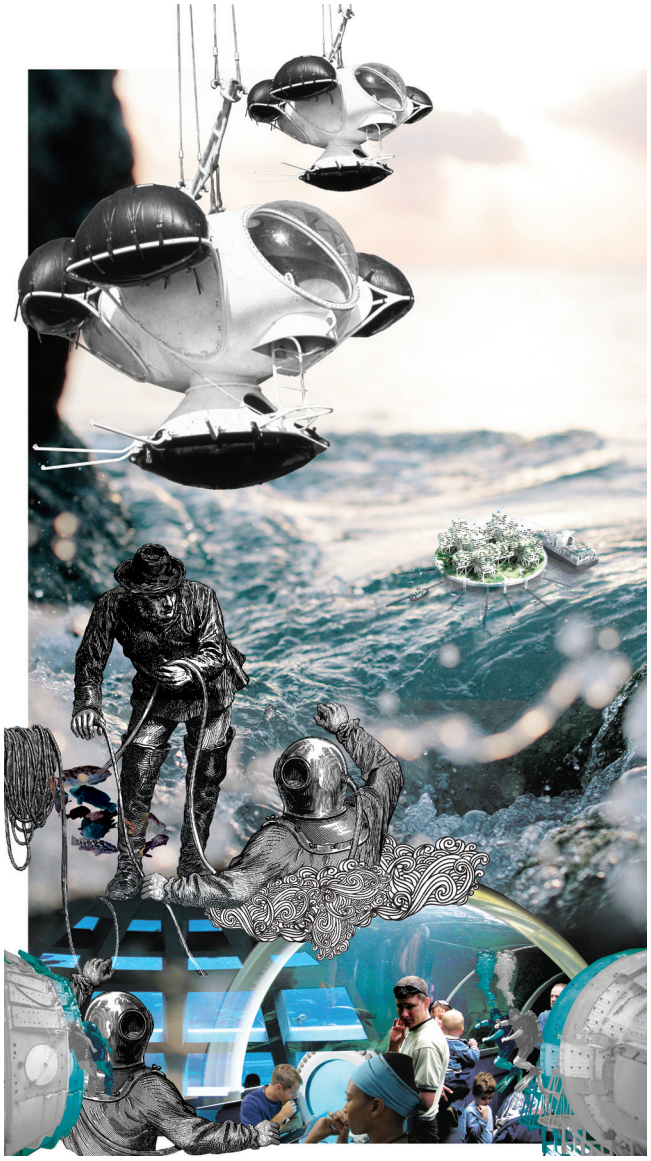
Of the Ocean: Interiors at the Scale of the Planet

Charity Edwards
Monash University, University of Melbourne, Australia

Abstract

Discussions of interiors have historically focused on bounded architectures, but interiority is instead experienced as an assemblage of power, technologies, and relations practised within planetary ecologies. Nowhere is this more apparent than in the ocean: an immense and embodied territory covering more than 70% of the surface of the Earth. This 'wet volume' is, however, largely absent from conventional disciplinary debates. Rendered either as surface, void, or aesthetic value, the ocean is ignored in our theorising of spatial experience. Similarly, ongoing climate and geopolitical crises of the Anthropocene guarantee there is no longer any 'outside' to speak of in this world. We must accept our shared interior totality, and engage with fluid relationships at the scale of the planet.

This chapter will examine planetary interiors, foregrounding the South China Sea in particular – where military skirmishes conceal slippages of the personal, local, and global; and myriad human and non-human entanglements. By rejecting the assumed neutrality of this boundless space, we can recognise the ocean-as-planetary-interior is elemental to thinking of – and living within – the precarity of this Anthropocene age.



Discussions of interiors have historically focused on bounded architectures (in both time and space), but more recent provocations of the Anthropocene complicate this simple understanding of spatial experience. Interiority can no longer considered to be limited to a 3-dimensional extent or fixed as an isolated moment in time, but rather, is experienced as an assemblage of power, technologies, and dynamic relations; all embedded within diverse overlapping ecologies of this planet.

Nowhere is this (literally) fluid complexity more apparent than the ocean. An immense territory covering more than 70% of the surface of the Earth, this 'wet volume' is, however, absent from conventional debates on the nature of space. Rendered either as material surface, unknowable void, or simply an aesthetic 'inspiration', the ocean is largely ignored in theorising embodied experience.

Contrary to this, our 'landed' life is sustained by connections we make with the ocean: a space that evades all attempts to contain, delineate,

Fig 1 - Rejecting Architectural Fantasies of the Ocean. (Photomontage by the author).

or even fix its perpetually fluctuating material state.[1] Similarly, the unrelenting climate and geopolitical crises of the Anthropocene age appear to declare that there is no longer any 'outside' to speak of in this world. This chapter will therefore explore the notion of planetary interiors, and foreground the ocean as a radical volume for designers. The South China Sea will act as a staging ground for this provocation: where military skirmishes conceal significant slippages between the personal, local, and global; and human and non-human life.[2] By rejecting the assumed nature of this boundless space, we can begin to recognise that the ocean-as-planetary-interior is elemental to thinking of – and living within – the precarity of the Anthropocene age. I therefore ask: can the ocean alter the discourse of 'the interior' as we conceive of spatial experience? And, when situating the ocean as an interior at the scale of the planet, what new conditions, inhabitations, and possibilities might we find latent within such a colossal distribution of space? These questions necessarily demand consideration of those customarily excluded from discussions of the interior: not least of all, non-humans and vast ecosystems.

Of the ocean

This discussion very much regards the space within the ocean itself: a volume that is all interior. However, I will not be drawing on utopian traditions of underwater cities or libertarian notions of seasteading. For how do these speculations speak to us of living in and engaging with the ocean? Architectural fantasies such as these shown in *Rejecting Architectural Fantasies of the Ocean,* [Fig 1] only replicate the landed bias of existing environments. Dry zones are re-inscribed into fluid substances, sealed bubbles cling to the seabed floor, and manicured lawns and skyscrapers float on the (somehow) secured surface of a mobile ocean. These efforts ultimately distance themselves from the prospect of a liquid volume; avoiding its perpetual dynamism, lack of fixed 'ground', interconnectivity with planetary processes, and inherent wetness of experience. These conditions all call human supremacy into question, but the fantasists instead desire to

Fig 2 - The Ocean - Simultaneously Outside and Inside. (Photomontage by the author)

Fig 3 - Wet Wet Wet (No Matter Where You Are) - The Planetary Interior of The South China Sea. (Photomontage by the author)

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reproduce what is already known and re-install it within a distinctly unique environment. Such willful ordering represents a fear of 'the other' rather than any kind of aquatic and/or spatial innovation. Contributing to this misguided endeavour, the ocean seems to lack characteristics we would ordinarily consider as spatial.[3] We are at a loss to identify geometric forms, perceivable boundaries, or consistent materiality in this space. And yet, more recent theorising on the ocean — from disciplines as diverse as political geography, literary theory, and marine anthropology — argue for the importance of a 'wet ontology' when considering this space. Emphasis is placed on the relational experience of the ocean, its dynamic substance, and more-than-human lived space.[4] For within the ocean, our conventional orders and scales slip, and we can no longer isolate the personal and the local from the national, regional, or even global (there is only one world ocean, after all). Moreover, everyday human life is entangled throughout the ocean with non-humans in ways that challenge the anthropocentric primacy we assume on land.[5]

The Anthropocene:
inside and outside, all at once

Thinking through the ocean allows us to reconfigure our relations to the world, and of the world itself. [Fig 2] Our shared interior totality reveals embedded relations that operate at the scale of the planet. As Ross Exo Adams notes: "[i]f interior was, for Benjamin, the space of withdrawal from the world, today interior has replaced the world. Withdrawal is no longer possible."[6] Similarly, and although a still highly contested notion across multiple disciplines, the Anthropocene highlights critical interdependencies between ourselves, non-humans, 'nature', and space. It hints that humans have never been entirely in control of this planet; and that what we experience of the world is always relative and in the act of becoming, linking all entities and the Earth in continual change.[7]

By acknowledging planetary processes, 'the interior' accepts the mutual implication of human and non-human in this rapidly readjusting world. This demands fundamental

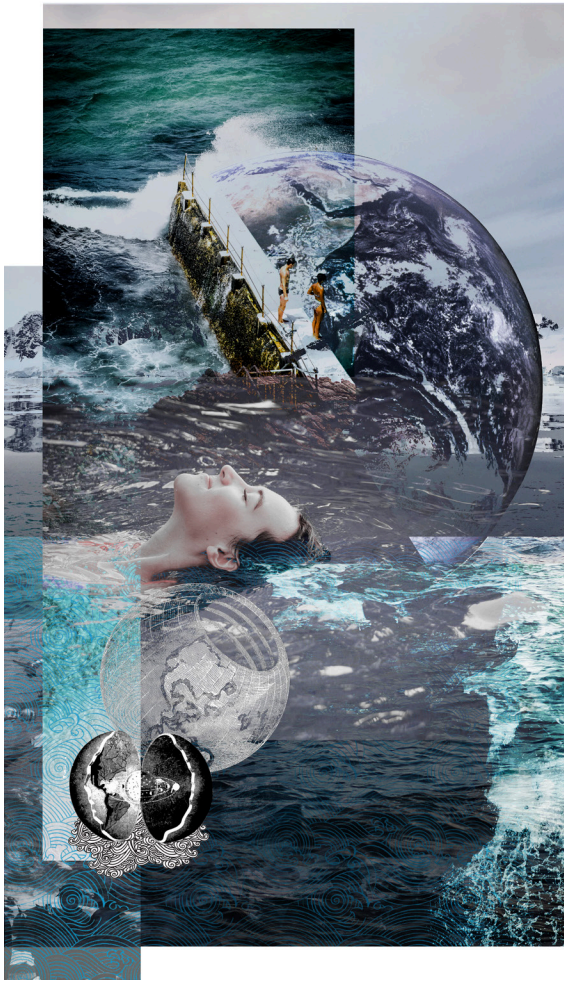


Fig 4 - The Fetishised Ocean. Perverse Attempts to Reverse Human Incapacity to Dominate Space. (Photomontage by the author)

transformations in how we observe, investigate, and design. That is, there is no 'outside' in the Anthropocene, and everything is within our purview. Indeed, in the face of such complexities, Donna Haraway declares we "need stories (and theories) that are just big enough to gather up the complexities and keep the edges open and greedy for surprising new and old connections".[8]

Planetary interiors revealed: The South China Sea

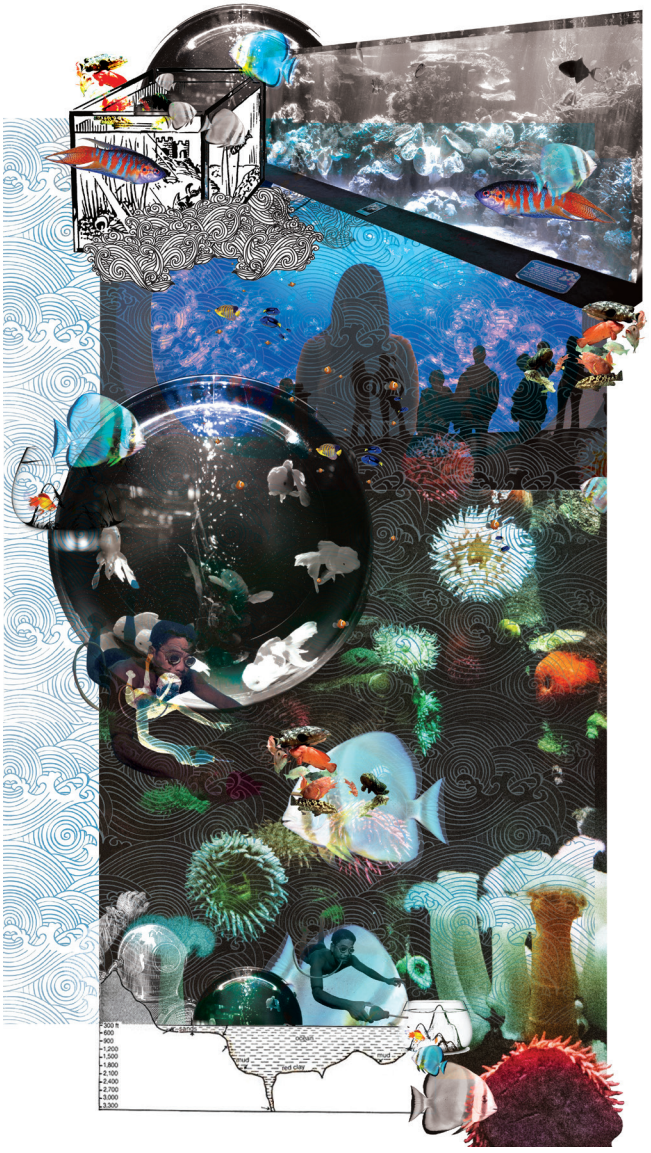
When foregrounding the lived and embodied ocean, I want to highlight a particular manifestation of this space: the contested maritime arena of the South China Sea. A collapsing of current conditions and events in this wet volume are shown in Figure 3: Wet, Wet, Wet (No Matter Where You Are) – The Planetary Interior of The South China Sea and reveal connections between experiences of the ocean and operations enacted back on familiar dry land: fishing, surveillance, transport, conflict, and growing cities are all entangled within. For recent disputes in the South China Sea are not just about artificial islands or geopolitical strategy, but the misrecognition of an interior at the scale of the planet. Reportage presents this space as a contest of military muscle, but ecological studies indicate overharvesting of marine resources in the South China Sea have created a desperate need for new fishing territories for states involved.[9]

Disparate spaces also connect with everyday lives through the growing trade in exotic tropical fish species: a global multi-million-dollar industry that often accompanies industrialised fishing. Keeping marine aquaria is an especially popular hobby in the United States,[10] and a source of picturesque leisure for humans. Decorative species kept within domestic fish tanks are, however, typically supplied from destructive sodium cyanide fishing practices in the South China Sea.[11]

Aquariums and anthropocentric interiors

'Nature' is thus systematically exploited for profit,[12] as marine 'enthusiasts' fetishise their relationship with the ocean at a more comfortable distance. Containerising a small

piece of an otherwise unstable volume, these creations are testament to the perversity of re-installing anthropocentric order in the ocean. Spatial experience is diminished, interdependencies severed, and a detached appreciation of the interior is elevated above its (less controllable) collective sensation. Avoiding the more-than-human planetary interior of the South China Sea also masks the unprecedented depletion, acidification and warming of this space. Real violence against non-humans is embedded in design decisions, as cyanide fishing reduces quality and quantity of life enjoyed by those tropical species targeted for sale in retail aquaria. Sodium cyanide only stuns fish temporarily, but is fatal to the coral colonies they inhabit. As coral health collectively declines in response to these actions, algae and other organisms disappear, and marine ecosystems collapse.[13] We obscure radical transformations of the ocean when we 'order' accumulated resources from this space: a practice made possible by refusing to acknowledge planetary interiors. [Fig4] *The Fetishised Ocean. Perverse Attempts to*



Reverse Human Incapacity to Dominate Space illustrates almost macabre attempts to reverse human incapacity for domination in the ocean, by those who create miniaturised 'wild' space within their suburban home interiors. For aquaria have enabled humans to 'manage' their fears of the ocean since first emerging as a popular pastime in 18th century Europe.[14] Contrary to this, actually experiencing the planetary interior of the ocean requires us to approach an uncertain volume, relinquish assumptions of authority, and recognise entanglements with other beings, matter, and planetary processes beyond our control.The future(s) of inhabitation will surely rely on our capacity to de-centre humans from understanding this planet and living within its precarious conditions. Planetary interiors remind us of the inherent instability of systems far larger than ourselves; and to re-perceive what we might assume simply to be just 'empty space' as assemblages of unevenly-experienced situations, co-constituted with others (living or otherwise) who are typically considered surplus to the remit of spatial practitioners. The implications of this are challenging to say the least, and especially so given current trajectories of climate change suggest many will perforce share experiences of a much wetter, warmer, and wilder interior in the future.

Interiors at the scale of the planet

By discarding a landed bias – and making use of wet ontologies to focus on the substance and interconnectedness of the ocean with our everyday lives – this discussion has complicated our appreciation of interior space. By delving into the South China Sea, we can now recognise this wet volume as a planetary interior, and one that alters our basic narratives of design and anthropocentric primacy. Accordingly, alarms sounded by the example of ordinary home aquaria fetishising human domination of the oceanic volume remind us to re-conceive interiors that transcend conventional spatial boundaries. We must register entanglements beyond land-sea binaries, and radically challenge assumptions regarding the delineation of 'inside' and 'outside'. In a sense, the future of 'the interior' is already here in this age of the

Anthropocene. Our obligation is therefore to recognise and reconnect with these spaces in ways that provide insight and agency to more-than-human beings through experiences that span the planet.

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A Future Interior is an Urban Interior

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Abstract

A future interior will trespass the architectural envelope to take up its place in the city, on the streets, and in those urban spaces that remain open to a public. A future interior shelters the capacity to become an urban interior, emerging as a site of contest between commercial interests and the desire of a provisional community to gather, to voice its concerns, to imagine other possible futures, or simply hang out together. The future of practices dedicated to the interior must develop an attitude to the status of the urban interior, and the kinds of spaces it can carve out. The greatest risk to urban interiors is the compulsion to produce commercial economic outcomes, to curate atmospheric spaces that arouse experiences that can be monetized as part of the experience economy. Those urban interiors in which nothing in particular takes place, where no specific use is programmed, and yet which invite forms of provisional occupation are becoming increasingly rare in light of the ongoing diminution of public spaces and the lack of places available as a commons that might be indiscriminately shared by all. It is becoming increasingly challenging to even imagine how to occupy what I call an urban interior without attaching some commercial program or financial gain to it. It follows that the interior architect who is socially and politically engaged must pause to ask: How can the urban interior be saved from capitalist recuperation? This is an ongoing challenge for the discipline of interior design and architecture.

Interior designers understand that a small gesture can create a surprising impact when placed carefully in a large-scale urban context; interior design has the ability to change the perception and thereby the occupation of urban interior environments without necessarily changing the material constitution of the built environment itself. Often small gestures, minor insertions, performative acts and relational practices are enough. The urban interior can be mounted at minimal or even no cost, it can be quick and easy to implement, and it may prove more powerful than over-designed and

grandiose renovations and constructions. Interior design as a discipline is used to working at a small scale, but it has the capacity to create large effects out of sometimes meager means. To create an urban interior it is crucial to understand that well-funded resources and large material changes are not necessarily the answer. Less than an attention to the design of objects, formal gestures and large-scale infrastructures, interior design acknowledges the complex social relationships between human subjectivities and spaces. It is this capacity that interior design brings to architecture and that it likewise could bring to the urban domain.

A future interior will continue to trespass the architectural envelope to take up its place in the city, on the streets, and in those urban spaces that remain open to a public, that is to say a future interior shelters the capacity to become an urban interior. Neither entirely inside, nor outside, the urban interior is a site of contest between commercial interests and the desire of a provisional community to gather, to voice its concerns, to imagine other possible futures, or simply hang out together. The future of practices of the interior must develop an attitude to the status of the urban interior and what kinds of spaces it carves out. Urban interiors express themselves in myriad ways: with the grand architectural gestures of the forecourts and plazas of large, commercial architectural projects; amidst infrastructural nodes seething at rush hour then ghostly quiet once everyone has retreated home again; en plein air markets and amidst other impermanent architectures, partially covered, now here, now gone, depending on the time of day, and day of the week; or eking out an existence in-between, in seemingly leftover spaces, the couch discovered on the empty lot, for instance. The urban interior takes up all these expressions, and can be found in all these locales, but it also suggests opportunities for the practices associated with creating other kinds of urban interior. The attribute of the interior when attached to the urban context suggests places of sufficient shelter, different speeds of traversal, places that are not domestic and yet hold the potential for something intimate to be

shared. The urban interior challenges any neat distinction between what is private and what is public. The greatest risk to urban interiors is the compulsion to produce commercial economic outcomes, to curate atmospheric spaces that arouse experiences that can be monetized as part of the experience economy. Those urban interiors in which nothing in particular takes place, where no specific use is programmed, and yet which invite forms of provisional occupation are becoming increasingly rare. How, then, can an interior designer participate in maintaining the openness of the urban interior? This question becomes urgent in light of the ongoing diminution of public spaces and the lack of places available as commons that might be indiscriminately shared by all. It is becoming increasingly challenging to even imagine how to occupy what I call an urban interior without attaching some commercial program or financial gain to it. As I write, the well-known architect-designed Federation Square in Melbourne Australia is likely to be passed over to the control of Apple who are opening one of their signature stores there. At first this would appear to be an example of the commercial capture of what should be public space, but what is overlooked is that Federation Square is already controlled by the Federation Square Pty Ltd, who limit the number of people who can publically gather without a permit, and whose guards watch closely over suspicious occupants.[1] Of what interest is this to the interior architect who might otherwise seek shelter well off the streets and squares of our cities? The development of urban interior design experiments, such as those I describe below, in fact first emerged in the Melbourne context where I was teaching and where Federation Square was an often-explored site. My argument for an urban interior suggests that the concerns of the interior cannot be so easily contained, and that the presumed privacy of the interior is rather more entangled with the publicity of public space.

It follows that the interior architect who is socially and politically engaged must also pause to ask: How can the urban interior be saved from capitalist recuperation, from the logic

of dollar per square meter? This is an ongoing challenge for the disciplines of interior design and architecture. The ways in which interior design is able to create spaces for peoples and their relations is at the heart of what the discipline can do. Operating in a large-scale urban context, interior design can deploy the power of small-scale interventions. The gift of a park-bench that places us closer to the ground, or challenges what we thought a park bench should or could do. An interior designer understands that a small gesture can create a surprising impact when placed well in a large-scale urban context. As Fran Tonkiss argues, there are moments and means of escape that can be found in "more minor practices, tactics of space which rely on sudden or small gestures."[2] Interior design has the potential to intervene in public and urban places, to rethink the relations between peoples, places and things. The commercial capture of public spaces can be interrupted by the small gestures interior designers are capable of making. The challenge is to increase the vocabulary of these gestures, and experiment with the kinds of gestures that cannot be easily co-opted, but which remain open to a public so that they might rest awhile in the urban interior.

Matilda Emricson, a former student at Konstfack, inserts small samples of furniture into urban spaces. Her furniture resembles the language of the already present and 'official' street furniture. She inserts an additional, simple element into public space through an act of spatial and material hacking, which can be described as a procedure of 'copy-alter-paste'. She explores what might happen when she introduces new, flat, timber surfaces, painted green, into a park, which make reference to the existing benches provided by the municipality. This resemblance to already-existing park furniture creates a ruse whereby her urban interior insertion appropriates the appearance of authority, achieved through her detailed craft and resolution, which adds seriousness and value to her designed objects. By placing her bench insertions at different heights she also plays with our perception of informal practices, such as begging. By placing them at

different locations she invites other sorts of spatial occupations that have otherwise been restricted or neglected. Her 'Gift for the City' encourages other embodied relationships and interactions with urban artefacts and street and park furniture and subtly suggests new forms of occupation of public space.

Lija Silin frequently uses her own body in her experimental, performative practices toward urban interior interventions. In one performance she scales the walls and lets tourists pass beneath her along a narrow passage in Venice, Italy. In the first place this can be understood as a minor provocation taking place amidst the everyday, triggering comments and reactions from the passers-by. It is an experiment that demonstrates how unexpected behaviour, and acts outside the norm can offer the designer a different point of view on a situation, as well as a means of rethinking how space can be experienced in different, less habitual ways. Lija dislocates herself from the mass of tourists, and even tries out what it feels like to occupy a position of relative power and privilege, looking down on the passing tourists. At the same time she exposes herself, because she makes herself more vulnerable in her precarious position. Any act that challenges expectations and conventions both holds the potential to alienate others and to produce the opportunity for unexpected relational encounters with others. In much the same way, any urban interior gesture, irrespective of the best of intentions of the interior architect, can create a positive or a negative effect on its context. This performance might be upsetting or at least challenging for the performer and the people encountering it, but it also holds the power to demonstrate to others that one can act, occupy, interact and just simply 'be' in urban spaces in other ways than the accepted or expected ways. Guy Debord identified such encounters as belonging to the journey of a dérive, he called them a 'possible *rendezvous*', which is to say, a meeting place where something might happen. We appear to be afraid of strangers on a city street, unless we are following the same behavioural patterns or sharing an exceptional event, such as a street party or demonstration. One moment

a stranger, the next moment an encounter after which we might shift our perception and our modes of occupation.

These minor tactics or actions can be described as a soft interior urbanism. Doina Petrescu, Constantin Petcou and Anne Querrien in conversation with Antonio Negri argue that large revolutions are not always what is necessarily needed. Instead, small acts, undertaken with minimal resources, but maximal participation can produce opportunities for living alongside each other in more positive ways, and this is what they call soft urbanism.[3] Petrescu and Petcou's often cited EcoBox collective urban gardening project, and their more recent R-Urban project both suggest ways in which shared urban infrastructures mounted by local communities can create opportunities for intimacy and being together in what I describe as urban interiors. Lacaton and Vassal likewise carve out what I call urban interiors, whether that be in the space of a museum such as the Palais de Tokyo where they worked within the constraints of a partially demolished interior, or in Place Léon Aucoc in Bordeaux where they argued that only the smallest readjustments to the local park were needed to make it more amenable to occupation. A small scale and simple intervention such as Public Works' The Cube (2007), designed to travel across various sites around the New Homes Project in Granville, creates a mobile place for small-scale local events with an emphasis on curating community participation of an urban interior.

Interior design has the ability to change the perception and thereby the occupation of urban interior environments without necessarily changing the material constitution of the built environment itself. Often small gestures, minor insertions, performative acts and relational practices are enough. The urban interior can be mounted at minimal or even no cost, it can be quick and easy to implement, and it may prove more powerful than over-designed and grandiose renovations and constructions. Interior design as a discipline is used to working at a small scale, but it has

the capacity to create large effects out of sometimes meager means.

To create an urban interior it is crucial to understand that large resources and big material changes are not necessarily the answer. Less than an attention to the design of objects, formal gestures and large-scale infrastructures, interior design acknowledges the complex social relationships between human subjectivities and spaces. It is this capacity that interior design brings to architecture and that it likewise brings to the urban domain.

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Socio-Spatial Crisis: The Urban Interior of Foreign Domestic Helpers in Hong Kong

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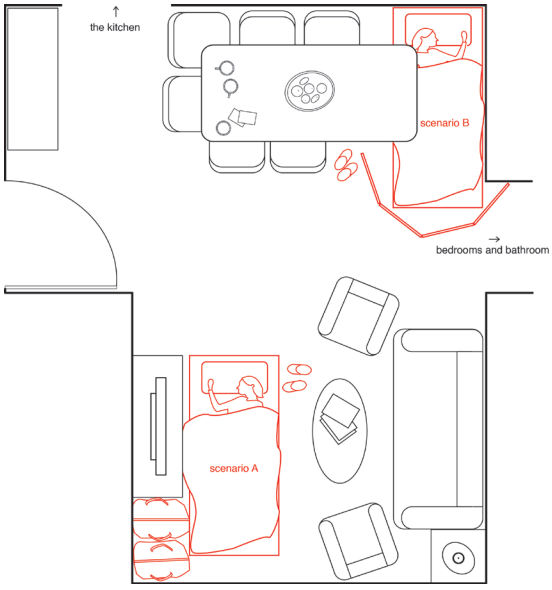
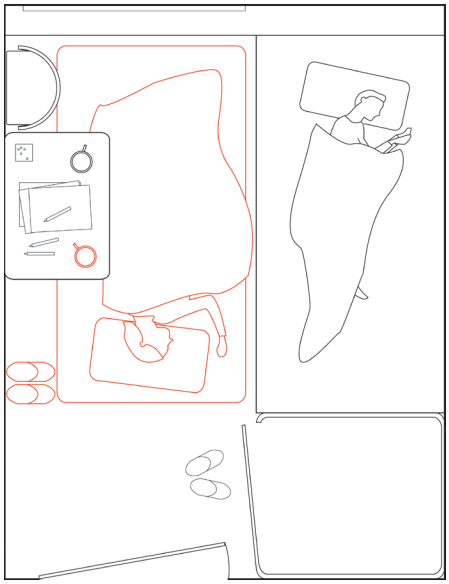
Abstract

Every Sunday in Hong Kong, Foreign Domestic Helpers disrupt the city's hegemonic spatial order by inserting a unique domestic interior into public space. Various urban exterior and interior spaces are appropriated and augmented into a temporary domesticised village where Foreign Domestic Helpers socialise, eat, groom, protest, send packages, dance and preach. At first glance, their makeshift interior may appear chaotically assembled. Closer analysis reveals that this ritualised spatialization known as Little Manila has a unique ecology; it is a temporary but repeated socio-spatial system that illustrates the socio-spatial crisis that the city-states's 350,000 marginalised contingent of migrant domestic workers dwell in.

This chapter explores how socio-spatial inequality has motivated the formation of an urban domestic interior. This interior is distributed among unexpected public spaces that are interconnected as a network that produces a collective culture of resistance, solidarity and resourcefulness.

It concerns the future of interior as disenfranchised groups' right to have space will continue to manifest in public urban spaces as they continue to be deprived of that right. As the importation of Foreign Domestic Helpers in Hong Kong continues and living spaces are continuously limited due to the city-states' rapid urbanisation, Little Manila will thrive and expand as an interior of resistance.


the kitchen
scenario B
bedrooms and bathroom
scenario A



Figs 1 & 2 - Diagrams demonstrating two scenarios of sleeping arrangements in the employers' homes, as described by Foreign Domestic Helpers interviewed in Hong Kong between 2012-2016. (By author)

We live in an age that is shaped by the global movement of people. Labour migration –temporary or permanent-creates a network of paths and spaces followed and inhabited by others. These traces illustrate a movement of global intensification that reconfigures the ways of living, which have led to the reconstruction of the interior. In Hong Kong, this notion has been spatialized by Foreign Domestic Helpers, who construct temporary 'homes' of their own in unexpected public spaces. Due to a lack of personal space in the homes of the employers – where they live and work – many of them occupy the city to socialise on their weekly day off work. In Central Hong Kong, this construct organically evolved over time and has become what is known as Little Manila.[1]

This particular urban interior is unique to the cityscape of Hong Kong, however it is illustrative of a socio-spatial phenomenon that is not an isolated incident specific to the city-state. According to the United Nations International Labour Organisation, currently there are 53 million domestic workers worldwide and nearly 80% are women migrants.[2] As such, this temporary interior that habitually occurs in Hong Kong illustrates the global issue of socio-spatial inequality of female migrant workers, who participate in domestic labour that legally deny their right to have living spaces of their own separate to their place of employment.

This chapter explores how socio-spatial inequality has motivated the formation of an urban domestic interior. Drawing upon ethnographic observations, photographs and spatial analysis, the paper illustrates how this interior is distributed among unexpected public spaces and how the spaces that are interconnected as a network produces a collective culture of resistance, solidarity and resourcefulness.[3] As the importation of Foreign Domestic Helpers in Hong Kong continues and their socio-spatial limitations remain unchanged, Little Manila will thrive and expand as an interior of resistance. Furthermore, this phenomenon concerns the future of interior as disenfranchised groups – beyond the focused group in this study - who are deprived of socio-

Figs 3 & 4 - (Left and below) Foreign Domestic Helpers recreate makeshift interiors of their own within the village of temporary cardboard units on the Central Elevated Walkway in Hong Kong. (Photographs by author 2014 and 2015)

Fig 5 - Common sighting on Sunday on different parts of the Central Elevated Walkway in Hong Kong. (Photograph by author 2014)

spatial equality will continue to manifest their resistance in public urban spaces in various spatial formations.

Background

350,000 Foreign Domestic Helpers currently live and work in Hong Kong. Since their migration from Southeast-Asian countries (such as the Philippines and Indonesia) in the 1970s, this labor group has been attending to the domestic chores of Hong Kong households, raising children and caring for the elderly. At the time, the initiative was as a solution to the shortage of domestic workers in Hong Kong, which resulted from Hong Kong women participating in the formal work sector. Despite their continuously important contribution to Hong Kong society, every aspect of the Foreign Domestic Helpers' lives is constrained by laws, which gives more power to the employers at the expense of exploiting the workers.[4] One of the most problematic regulation within their work conditions is the mandatory live-in requirement at the employers' homes. From the ethnographic data collected from fieldwork conducted in Hong Kong between 2012 - 2016, many Foreign Domestic Helpers' sleeping arrangements are mattresses placed on the floor next to children's beds, or in the inconspicuous corners of communal spaces. In their employers' domestic interior, the Foreign –Domestic Helpers' space disappears when their makeshift beds are removed and stored away as the workday begins, commencing their continuous spatial collapse. During their work hours, they exist in the assigned tasks, moving between spaces within the domestic interior; the kitchen, bathroom, bedroom, and public spaces; playgrounds, supermarkets, laundromats and so on. They appear in those interior and exterior spaces not as occupants but as transient figures. Within their employers' homes, they are disciplined to complete tasks as required, speak English or Cantonese only, wear appropriate attire as permitted, eat foods as allocated, and rest at designated times.[5] From the outset, Foreign Domestic Helpers' autonomy and their personal and physical spaces are dissolved into the workplace – they have no private interior of their own. As they are

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NO SITTING IN THIS AREA

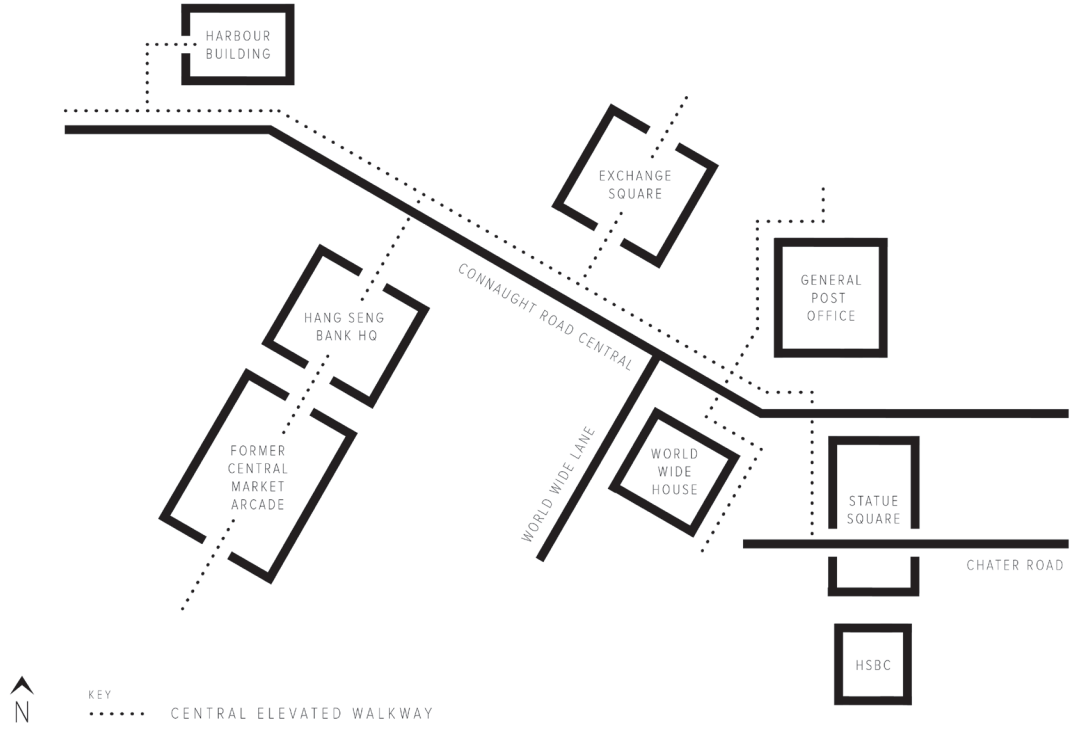
HARBOUR BUILDING
EXCHANGE SQUARE
GENERAL POST OFFICE
CONNAUGHT ROAD CENTRAL
HANG SENG BANK HQ
FORMER CENTRAL MARKET ARCADE
WORLD WIDE LANE
WORLD WIDE HOUSE
STATUE SQUARE
CHATER ROAD
HSBC
N
KEY
CENTRAL ELEVATED WALKWAY

Fig 6 - Map of Little Manila. (By author)

only permitted one rest day each week, for the majority of their time, these migrant women endure a particular kind of oppression: a socio-spatial depletion and a cultural deprivation. With the security of employment that supports their family back home, many Foreign Domestic Helpers remain voiceless and spaceless. This underpins their socio-spatial inequality.

Sunday

Foreign Domestic Helpers resist the socio-spatial inequality they experience by constructing their own domestic interior in public space on their day off work. On a typical Sunday afternoon in Hong Kong in 2012, I was walking along the Central Elevated Walkways, a series of elevated passageways that connect over twenty-five buildings in Hong Kong's CBD – when I noticed a disruption to the smooth circulation usually afforded by this suspended horizontal 'ground' plane. I saw groups of women – Filipino women - sitting on flattened cardboard boxes on the ground.

They were eating, chatting, some were sleeping, playing card games, even tending to each other's beauty routine. Small suitcases and various baggage sat alongside them within the informally demarcated spaces. Some groups had cardboard boxes standing upright or opened umbrellas acting as barriers between the pedestrians and themselves. Shoes are placed on the periphery of the cardboard matts, resembling the common Asian practice of the removal of shoes when entering the home. Some of the women had their backs turned away from the pedestrians, intensely focused on each other and their conversations in Tagalog.[6] Pedestrians negotiated the footpath with these domestic arrangements by compressing their movement into single file, moving through uneasily one after the other. Taking in the details of the scene in front of me, it became evident that I was among an informal Foreign Domestic Helpers territory and I was overwhelmed by the intensity of their collective appearance and domestic residency in public space. As I continued along the elevated walkways, where other domestic spaces disseminated, the entirety of Little Manila emerged.

環球商場
WORLD-WIDE PLAZA

Fig 7 - World Wide Plaza ground level entrance.
(Photograph by author 2015)

Little Manila

Very early on Sunday mornings, Little Manila begins to emerge as flattened cardboard boxes appear in different parts of Central, symbolising Foreign Domestic Helper's informal ownership. Each group returns to the same space every Sunday, and the gathering areas are informally grouped according to Filipino provinces and regions. In Central, a variety of urban interior and exterior spaces offer a range of goods and services to the Filipino community. The following section charts the various areas within Little Manila and the designated programs World Wide House is a commercial building that is a central provider of Filipino food and magazines. Situated within the first three levels of the building is the World Wide Plaza, which is connected to the makeshift domestic spaces on Central Elevated Walkway (as described in the previous section). The retailers within the mall are mostly Filipino vendors, selling Filipino food, magazines, and providing banking and telecommunication services. Every Sunday, Filipino Foreign Domestic Helpers saturate the three levels of retail spaces and the surrounding entrances and staircases. The many interstitial spaces of World Wide Plaza also act as a series of temporary waiting areas and meeting grounds.

Parallel to World Wide House is World Wide Lane, a narrow pedestrian laneway that becomes an extension to the meeting areas of World Wide House. It houses a Filipino fast food store and a convenience store. More interestingly, it is also a space where crowds of Filipino women gather to watch and participate in public karaoke performances. On the corner of World Wide Lane and Des Voeux Road Central, a Filipino telecommunication shop holds karaoke competitions at its shop front. Every Sunday, the event is hosted by a charming Filipino man who addresses the crowd in Tagalog and English; attracting a sizeable audience of Filipino Foreign Domestic Helpers and tourists. The audience gathers all around this street corner, extending onto the footpath and into the atrium of World Wide House, which is shared with an underground entrance to the Central Mass Transit Railway station.

Fig 8 - Diagram of crowds occupying World Wide Lane during the karaoke performance. (By author)

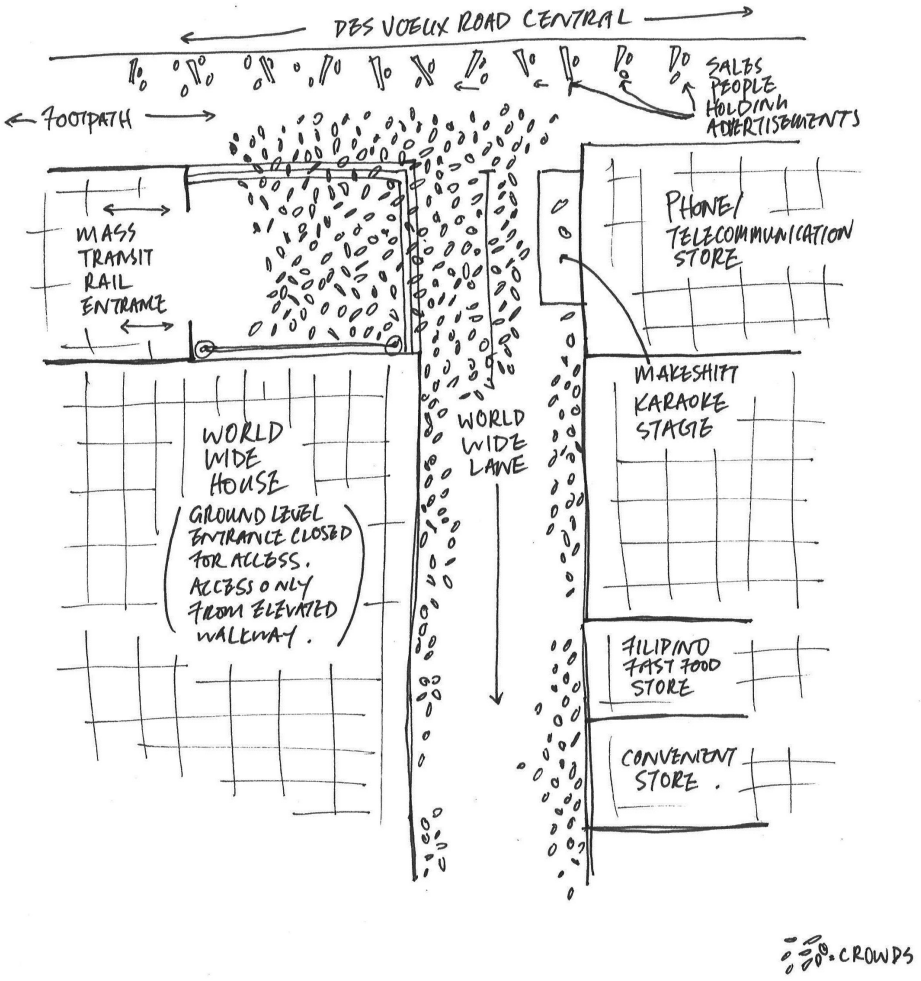

Fig 9 - Diagram of the makeshift post exchange on Connaught Road Central. (By author)

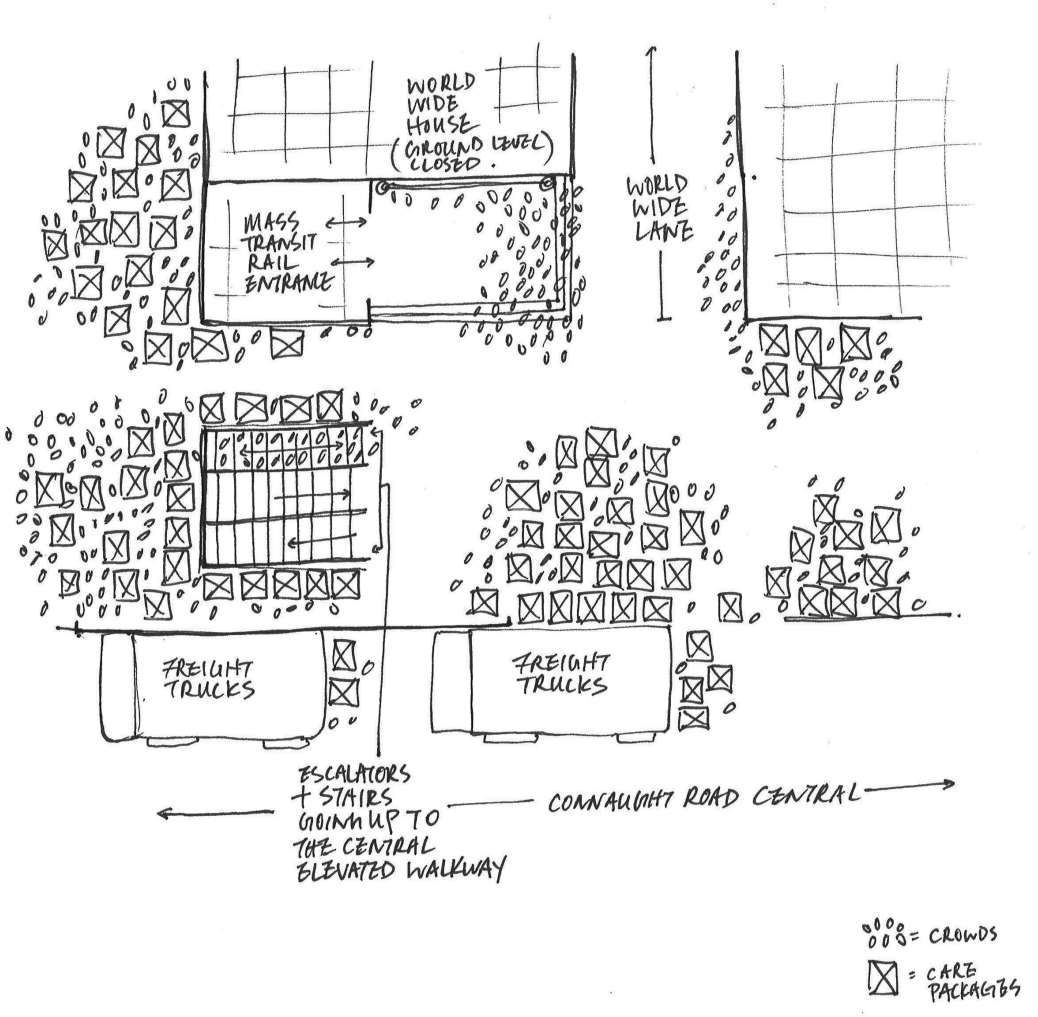

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Fig 10 - Packages along the footpath waiting to be processed. (Photograph by author 2013)

On several occasions on Sunday, security guards from the station instructed the crowd to disperse. Despite the repeated instructions over megaphones, the crowd ignored the requests and continued to cheer at the karaoke performances. This small act of defiance reflects the Foreign Domestic Helpers' resistance, despite its rare occurrence within their employers' homes. On the adjacent corner to the karaoke area is a packing and loading zone that occupies approximately thirty meters of Connaught Road Central. For most of the day, the surrounding pedestrian footpath is occupied by groups of Filipino Foreign Domestic Helpers, organising large parcels known as 'care packages', postmarked for the Philippines. These packages usually consist of clothing and personal care items that have been purchased in bulk and sent back to families in the Philippines as gifts.

As most Foreign Domestic Helpers do not have bedrooms of their own in their employers' homes, many of them save the remainder of their money after remittance until they can afford to buy the gifts in bulk, then pack and send the parcel on the same day. This sequence of events - purchasing, packing, labelling and loading – can take an entire day, starting early in the morning. Pedestrians accessing the surrounding complexes negotiate their way through this small section of Connaught Road Central, which becomes a seemingly chaotic Filipino postal exchange every Sunday.

Within a minute's walk from Connaught Road Central, the pedestrianized Chater Road provides open spaces for Foreign Domestic Helpers' choreographed dancing and political rallies. Chater Road is a street that houses numerous flagship stores of high-end international fashion designers. When the road is closed to vehicular traffic on Sunday, it becomes the designated site for Foreign Domestic Helpers' political demonstrations. A variety of protests take place, motivated by incidents of violation or injustice, such as the court ruling that refused citizenship to a Filipino Foreign Domestic Helper in 2013. The protest saw over 10,000 people gather on Chater Road. Dancing

Fig 11 (Below) - Diagram of crowds engaging in protests, dance practices and other social activities on Chater Road. (By author)

Fig 12 (Right) - Chater Road transforms as hundreds of Foreign Domestic Helpers gather to participate in choreographed dancing as part of the 'One Billion Rising' campaign on a Sunday in 2015. (Photograph by the author 2015)

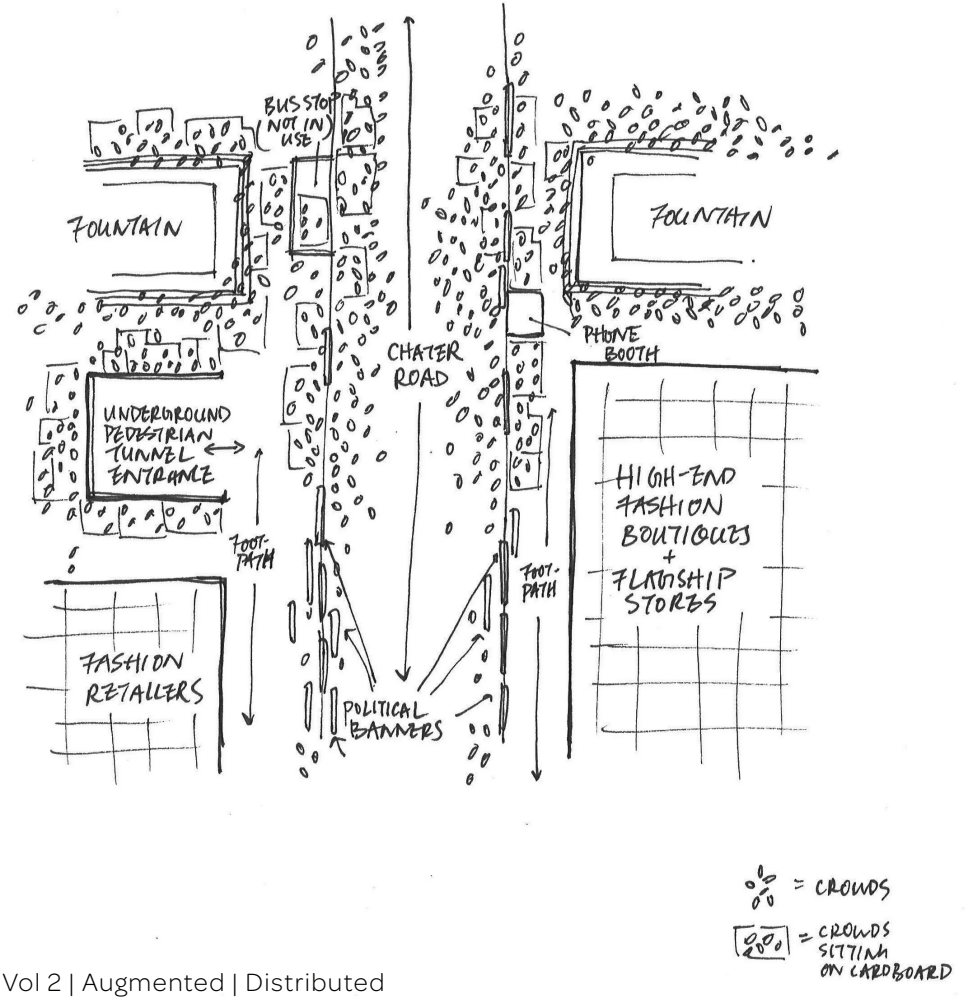
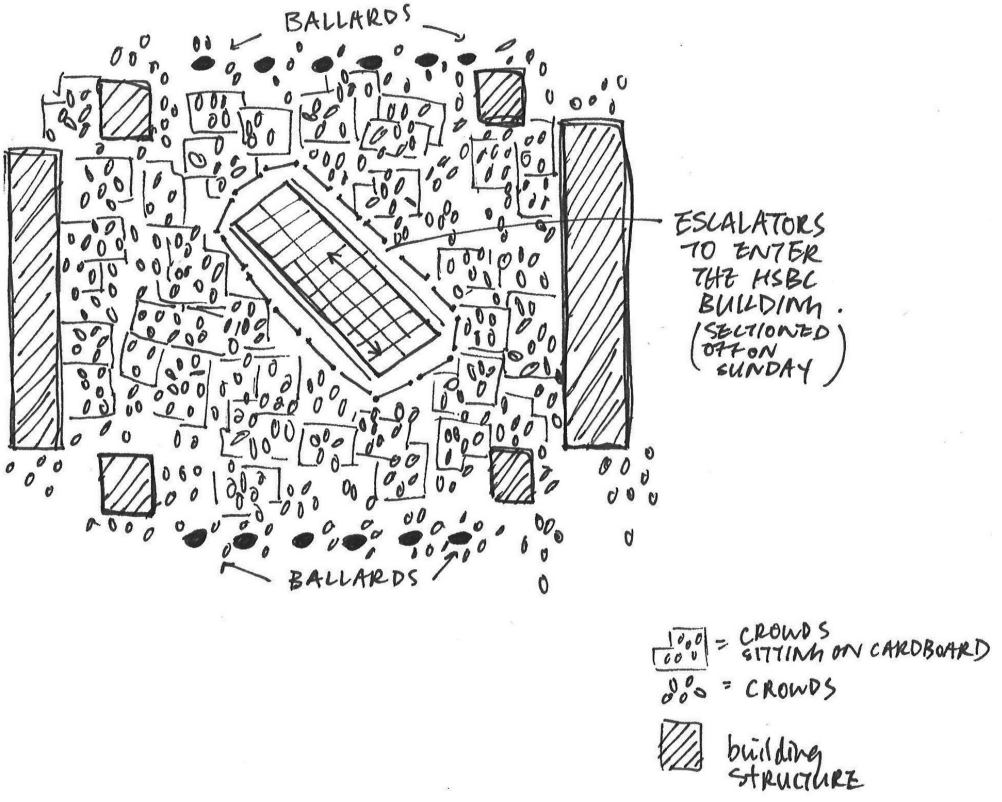


Fig 13 (Below) - Diagram illustrating the clusters of Foreign Domestic Helpers inhabiting the cavernous atrium. (By author)

Fig 14 (Right) - The atrium is a popular spot for gatherings every Sunday due to its protective structure from various weather conditions. (Photograph by author 2015)



is also a popular method of political expression amongst Filipino Foreign Domestic Helpers. They dance in groups to Filipino pop songs about female empowerment and freedom from oppression. Running parallel to Chater Road on Queens Road Central is the HSBC headquarters building. Designed by architect Norman Foster, the core of the project, apart from developing an iconic monument representing the global financial capital of Hong Kong, was an attempt to create a public area via its street level atrium entrance. From Monday to Friday, this open atrium serves as a busy pedestrian thoroughfare for HSBC workers and other corporate workers in the Central district. However, on Sunday this unique piece of privatised public space gives opportunity for Foreign Domestic Helpers' temporary inhabitation.

In this space, Filipino women gather in clusters towards the centre of the atrium, leaving circulation space for pedestrians on the periphery. Similar to the domestic activities they engage in the makeshift spaces they have created on the Central Elevated Walkway, Foreign Domestic Helpers here sit on flat cardboard boxes while sharing food, chatting in Tagalog, sleeping, attending to self-care or administering beauty routines to their friends. Some stand near the edges of the atrium away from the crowds, speaking to their families in the Philippines using various digital devices.

Over the course of Sunday, Central is overlapped with the construction and infiltration of Little Manila, producing a temporary but repeated socio-spatial system of layered spaces; an ethnic enclave, a site of contention and an urban domestic interior.

The interior of the future emerges from the Foreign Domestic Helpers' radical insertion of the domestic interior into public space. Through opportunities in freely accessible public spaces distributed along unexpected spaces that are otherwise not saturated by other city-users - the elevated passageways, atriums, laneways and footpaths - these migrant women, as a disenfranchised contingent, have inscribed a different interior; one that habitually

disappears and reappears. It is an interior that appears with the full force of freedom, agency and action, and its dissolution leaves behind the memory of its occupants and spaces. This interior is situated externally to the traditional boundaries of interior spaces and appears as a network; one overlapping public spaces that have prescribed a specific spatial order. Little Manila is a reconstruction of the home that Foreign Domestic Helpers do not have in Hong Kong, and an illustration of the socio-spatial inequality endured within the confines of the private domestic spaces.

Despite having little control over the majority of their residency in Hong Kong, every Sunday, this makeshift interior allows these disenfranchised migrant women to reclaim space, autonomy and integrity. For as long as their workforce – along with the contamination of the home and workplace - exist in Hong Kong, this urban domestic interior will continue to thrive as an interior of resistance with the ability to cultivate, adapt and reconfigure.

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Author Biography

Evelyn Kwok is a spatial theorist and designer with expertise in cross-cultural situations of urban informality. Her ethos as a researcher, a teacher and a designer is strongly grounded in social equity and has been developed through her PhD work with Foreign Domestic Helpers in Hong Kong. Evelyn also teaches across architecture, spatial design and collaborates with interdisciplinary designers to create global research intensives and exhibitions. She has presented work in Melbourne, Hong Kong and Lisbon, and has also exhibited at the Sydney Biennale 2012.

Transient Domesticity in the Urban Interior

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Abstract

This chapter considers a refurbished Bermondsey Street in London as an interior space where objects of memory are curated into a reconstructed atmosphere of domesticity. I argue that as our experience of the city becomes increasingly transient, our notions of inhabitation shift to a wider and more fragmented context, and our ability to integrate with the urban environment becomes eroded. Bermondsey Street, however, presents a distinctive experience illustrating how phenomena of intimacy and familiarity can converge across space and time to provide a more stable form of inhabitation.

In order to understand how these phenomena occur, and how the experience of the urban interior manifests itself in our consciousness, I follow a phenomenological method of intentionality, whereby the urban interior becomes the intentional object. This phenomenological narrative is illustrated as a meditative journey through images—a recollection of memories of the homely, initiated by the encounter between consciousness and the way the interior animates imagination. Such a phenomenological approach can thereby link past and present in future transient experiences of the urban environment as an interior space.

'Growth is the continual condition of the city'[1] remarks historian Peter Ackroyd. In London, there are places where the old and the new coexist to provide continuity between past, present and future inhabitation, while in others, building developments have erased all traces of past lives and familiar points of reference, altering the urban landscape beyond recognition. Rising costs of living have also forced many people to move further away from the city centre and commute each day. Their encounter with the city becomes transient, composed of short bursts of experiences, which, Charles Rice explains, contribute to 'the dynamic energy of the modern city.'[2] However, rapid change and transience can also destabilise us and create a fragmentation between body and space that impairs our ability to cultivate meaningful connections with our surroundings. This impermanence results in a shift in the meaning and experience of inhabitation, once related to a specific and even permanent location—often the home and its immediate community. Now, it encompasses a plurality of situations. We may inhabit the place where we work and another where we socialise. We may also, for a while each day, inhabit the transitional spaces we use to commute. Urban planner and designer Ali Madanipour tells us that 'we constantly need to draw boundaries as part of our need for wellbeing.'[3] As inhabitation becomes increasingly impermanent, the need to redraw boundaries may intensify and our sense of continuity weakens. Consequently, if we consider the fast pace of change in contemporary cities like London, it becomes increasingly important for future designs to consider how urban environments can foster the sense of place and belonging that underpins our need for psychological and emotional integration. One way of doing this is to embrace the distinctiveness of local phenomena, and for the transient population to take some degree of ownership of its surroundings, 'enabling the individual to develop a sense of identity and engage in the rituals of communication and recognition.'[4]

The Urban Interior

London has, so far, resisted homogeneity, still

offering unique and distinctive experiences to the transient inhabitant. Far from a single entity, the city is experienced as a network of constituent parts, nested against each other, each infused with a recognisable identity and idiosyncrasies whose meanings, familiarity and recognition generate a distinct sense of place. A rich palette of phenomena, experienced gradually as we move through the city, brings forth a surprising variety of situations, which, woven into a cluster of spatial experiences, embody the values, beliefs and dreams of the city's inhabitants. As such phenomena permeate our consciousness, body and mind become immersed in the singularity of each experience to initiate a feeling of 'insideness'. This animates imagination and impacts our fundamental ability to perceive our location in the world, in relation to other places outside the locus of perception of the body. Madanipour tells us, 'the body mediates between the states of consciousness and the world.'[5] This occurs quite naturally when we are inside the private interior of our homes, where, following Madanipour's metaphor on the perceived layers of privacy, we 'can be seen to be situated at the core of a multi-layered shell, surrounded by an onion-shaped structure of layers of protection.'[6] We are not only conscious of the room we are in, but also of other rooms around it, of the street nearby, the road beyond, the area where the house is located and the city around it. In imagination, the interior transcends traditional walled boundaries. Therefore, urban interiors are connected to each other not simply through spatial relationships and actual thresholds but, as the notion of interiority is transposed to the streets of the city, they also connect through perceptual thresholds, described by Karin Jasche as 'meaningful, psychologically effective transitions.'[7] Accordingly, even when the city appears to be whole, it is experienced as a series of nested interiors. Thus, in the midst of London's ancient interior, in the Borough of Southwark, lies Bermondsey Street, one of the city's original nested interiors. The area was home to leather industries from the Middle Ages until the nineteenth century, and street names such as Tanner Street and Leathermarket Street reflect this. Then, its

proximity to the River Thames made it an ideal location to store and process food arriving by ships in the docks nearby. People didn't just work there, however; it was also for many a place of dwelling—a home. Today, it is occupied by creative agencies, crafts showrooms, art galleries, restaurants and specialist boutiques, all bearing the qualities of the local environment. Architecturally, while its remaining nineteenth- and twentieth-century warehouses have been carefully restored to safeguard its more recent heritage, new additions favour a style of contemporary design that embodies a desire towards a symbiotic relationship between past and present, and cultivates a promise of integration into future developments. In Bermondsey Street, our sense of interiority is enhanced by a distinctive threshold. From the city centre, the street is accessible via a tunnel underneath a railway bridge. It is deep and cavernous; it takes a few minutes to walk through it. The space envelops, sounds are contained. Architect Peter Zumthor speaks of the threshold as a 'transition between the inside and the outside, an incredible sense of place, an unbelievable feeling of concentration when we suddenly become aware of being enclosed, of something enveloping us, keeping us together, holding us....'[8] The tunnel provides an immersive experience that forces the mind to surrender from one scale of perception to another. On one side lies the exterior—the city with its fast-moving pace and tall buildings—while on the other lies the interior of Bermondsey Street, where the space around the body becomes narrower, the buildings lower, the traffic slower, the textures more noticeable and the colours warmer. The singularity and temporality of the threshold provide a perceptual stage for the street to reveal itself in its most intimate setting. Beyond the architectural notion of scale, Zumthor explains that levels of intimacy relate to proximity and distance[9] and so the interior connects with the body. The effect of spatial and perceptual relationships in the intimate interior of Bermondsey Street is almost immediate, and the inner space of the body harmonises seamlessly into this new environment, while experiencing phenomena that bring forth an acute sense of place. Intuitively, we feel a sense

of familiarity and comfort. It is therefore through enquiring into the essence of these phenomena, illustrated here as a phenomenological journey through the interior, that it becomes possible to grasp the structure of experiences, and articulate the qualities that enable our most intimate space—the inner self—to integrate with this interior.

Transient Domesticity

The visible world reaches us through multi-sensory perceptions, and so visual experiences contribute to what philosopher Gaston Bachelard refers to as 'the polyphony of the senses' whereby the 'eye collaborates with the body and other senses'[10] for our perceptual memories to enable us to use the eyes to touch, smell, hear and taste; to grasp notions of depth, kinaesthesia and time. With a phenomenological focus on the interior of Bermondsey Street, images begin to emerge within the inner space of consciousness, and, in imagination, the inner-self is able to perceive its surroundings with renewed wonder. The meditative journey through the interior becomes a gradual recollection of moments of lived experiences through the encounter between consciousness and the intentional object. Familiar features that bear the essence of the homely act as symbols of continuity and recognition for the transient inhabitant, and the domain of the private initiates memories of lived experiences, conforming to Bachelard's view that 'imagination augments the values of reality.'[11] The collection of images in this chapter illustrates how the interior incorporates points of reference that present engaging opportunities for phenomena experienced across space and time, as well as clear boundaries, and a continuity that enables the inner self to authenticate through interaction with the space. The resulting narrative aspires towards what Rice refers to as 'an interior of unproductivity [...] needed to counter the rationalization of the metropolis,'[12] in this instance, where the experience of inhabiting becomes bound to the original notion of shelter, as when Bachelard speaks of the home as a place for dreaming.[13] As in a domestic space, the coherence of the features encountered throughout the interior

indicates that it is curated to reflect the values, beliefs and dreams of its inhabitants. The curation signals that a selection process has taken place—a desire towards a symbiotic relationship between past, present and future. The features on display do not, therefore, need to represent authentic memories of the present-day inhabitants. Instead, the curation intentionally appropriates and repositions selected memories to reinstate them into the present so that, in this instance, the distinctiveness of the local phenomena becomes an intentional perceptual map of domesticity. Images of the homely provide a degree of recognition and intimacy which, explains philosopher Gernot Böhme, brings the dimension of historical depth necessary for its inhabitants to feel sheltered and at home.[14] This, as Rice tells us, belongs to the domain of long experience, 'founded on an appeal and a connection to tradition, and the accumulation of wisdom over time.'[15] As time becomes 'spatialised', we experience continuity as well as a sense of place. The urban interior of Bermondsey Street sustains meaningful public-private relationships as it merges with the imagination of its transient inhabitants, and converges with contemporary and future values.

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5. Ibid., p. 8.

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All images in this chapter are by the author, 2015. This chapter is adapted from a previous article published in the IDEA Journal. Valerie Mace, The Transfigured Phenomena of Domesticity in the Urban Interior, IDEA Journal 2015, Urban + Interior, pp. 16-37, ISSN. 1445-5412.

Author Biography

Valerie Mace is a Senior Lecturer and Course Leader at University of the Arts London, where she teaches interdisciplinary spatial practices. Her research centres on spatial experiences, sensing and atmospheres in interior and urban environments. In her work, she develops sensory research methods and practical applications for design. She is currently working on a doctoral research project investigating how experiences of affective atmospheres contribute to emotional attachment to place in public interiors.

Figures

1 - Warm tones, tactile textures and smooth surfaces bring a light and welcoming feel to the interior. The stillness of the atmosphere suggests repose.

2 - The tones and tactile qualities of a large timber panel reveal the passage of time and wrap the eyes with a sensation of comfort. Like a picture on a wall with a story to tell, it inspires a pause.

3 - The light filters onto a dining terrace to highlight the mellow tones of the wall surfaces. A cheerful display of seats echoes the chatter of people enjoying a meal around the dinner table.

4 - Materials bearing the patina of time, lines and familiar scars inscribed across surfaces, reveal the textures of the repetition of daily gestures, acting as a reminder of the many lives of the interior.

5 - Near a side door and into a small room, people perform the rituals of daily activities—cleaning, storing, making, moving, fetching, resting, daydreaming; the domestic scenography of the interior.

6 - Two steps up onto the chequered kitchen floor, a mouth-watering smell of food emanates from the interior while, in the background, a radio plays a lively tune.

7 - In a glass cabinet, an incongruous display of objects showcases a cherished collection: bottles of various sizes and colours, an old radio, kitchen scales and a few enamelled teapots.

8 - The glimpse of a fireplace, the image of the fire warming up skin and spirit in winter, coming home from the cold, almost rushing in anticipation of the warmth of the interior.

9 - With just enough space for a table, a couple of chairs and a few plants, this cosy corner becomes a sun trap where, through semi-closed eyes, daydreams merge with reality.

(Photographs by author)

LIBERTY ALE
SAN FRANCISCO

We Desire a Kind of Freedom

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Abstract

As the interior is now clearly a much wider category of experience than traditional definitions offer; as all has become interiorised by technology and politics, and as boundaries between private and public realms have been rendered charming fictions, a new set of aims, responsibilities and acts are necessary in order to reclaim the interior as a space for people: their imaginations, encounters, associations, movements and actions. This paper concerns possibilities for this much greater, and public, interior. In the West, this extensive realm and its declared and undeclared environments are increasingly and unremittingly instrumental: a complex of devices, representations and effects designed to produce predictable subjects, affects, performances, and behaviours. Its great paradox is its promise of freedom: but that freedom is contingent upon consumption, agreement and obeisance to the 'nature' of the Market.

This essay briefly sets out a programme of possibilities for practice and experience for the coming years, as resistance to the 'ecologies' of the market and the phantasmagoria that sustain its unsustainable hegemony.

It is an argument for a different quality of experience and a different order of artifice, disconnected from the currency of neoliberalism and its constantly expanding co-option and transformation of difference into capital, and connected instead to deeper narratives about material culture. It is an argument for environments in which people may be consciousness of their place in the world and among others. (It is an argument for architecture.) It is an argument for the familiar rather than the uncanny, for the constantly unfolding present rather than the unattainable future, and spaces in which individuals––others, all––may be truly free to move, associate and act. It is an argument for another kind of freedom.

As the interior is now clearly a much wider category of experience than traditional definitions offer, as all has become interiorised by technology and politics, and as boundaries between private and public realms have been rendered charming fictions, a new set of aims, responsibilities and acts are necessary in order to reclaim the interior as a space for people, for their imaginations, encounters, associations, movements and actions. The future one needs to attend to is that of the interior condition, one that is increasingly private while offering the impression of being public. In the West, designs within an extensive urbanised and interiorised realm have been rendered ever more instrumental: a network of devices, representations and effects that produce predictable performances and behaviour. The great paradox of this complete environment and its condition of interior is its offer of freedom, which is contingent upon consumption, and obeisance to the 'nature' of the Market. A desire for the future, practices and experiences that resist the ideas of the market, its false 'ecologies', and the phantasmagoria that sustain its hegemony; that are disconnected from the currency of neoliberalism and its constantly expanding co-option and transformation of difference into capital. The future of the interior demands more than the fitting out or occupation of buildings or the city: its designers and thinkers must come to understandings and interpretations of the city and all the people who use it. The city's spaces, arrangements and relations require deep inquiry so that 'places' might be proposed and made for people to be themselves, among others, and furthermore, to be conscious of themselves in the world so that they may be protagonists rather than subjects, not only in their own lives, but within the genuinely public life of the city. To achieve this, future interiors might look to interiors past, drawing from their rich resources and the emancipating capacity of their allusions. One desires people's engagement with the constantly unfolding present rather than a sham future, and with spaces in which individuals—others, all—may be truly free to move, associate and act. One desires another kind of freedom.

What is the interior?

When the word interior is used, it is the room that tends to come to mind first: one thinks of the private space or domain of the individual, a realm commonly thought of as at once removed from, protected, or sheltered from the world. There is a tendency to fail to consider that this realm as, in fact, continuous with a public world, and that the private interior is shaped by conventions; that a room of one's own resembles the rooms of others; that a room is one among many other such rooms that are parts of towns, cities and their territories, and is but one type of room among all types of rooms that together are indexes of those constructs that frame societies, social groups, families and individuals, their terms of agreement and their notions of relations, within which all must find a place. Together, the rooms of our experience are embedded within another interior of ideas and ideology. Through this, we can speak of the city as an interior, and of a condition of interior that extends throughout our societies and their diffuse and territorial urbanised environments.

Conventional and theoretical descriptions of the interior of late have tended to be consistent, reinforcing that imagined boundary between an enclosed, private space and the public world, and characterising the interior as an extension of the body, its layers emanating outwards towards its edges like layers of clothing[1] from the private self (and its interior world of imagination) to the walls of the literal interior.[2] That interior is, in fact, a construct that reflects – sometimes in imagined opposition – the conflicting programmes of conventions, ideology, culture, institutions, the family, and the individual's place within them.

Other orders of interior

Roman colonial settlements were defined as interiors, set within and against the environments in which they were founded;[3] the fortified cities of Western Europe and beyond that followed were similarly interiorised, enclosed environments, accommodating citizens within a realm of set agreements and laws that governed their behaviour. The United States' programme of territorial colonisation of

the continental interior–exercised through the intertwined trajectories of ideology, military conquest of indigenous peoples, and legislation, from the institution of Thomas Jefferson's Land Ordinance of 1785 to the 'closing of the frontier' around 1890–came to effect a coherent and continuous spatial and ideological interior through the agency of the grid, in which all phenomena were captured and codified, from the landscape through the street and the bedroom.[4] The continental interior was thus rendered the manifestation of a continuous interior of ideology, and the field for the appearance of all other interiors, spaces, and effects: a condition of interior, intensified by politics, technology and media.[5] In our current environment of global neoliberalism, which transforms cities into enclaves of display and exploitation,[6] one must recognise the interior as a much broader category of experience than the room, or even the territory. The interior is everywhere.

Much recent debate in the field of interior architecture has focused on its theoretical and practical boundaries, appropriate attentions, and its relation to professional practice; the distinct agency of interior architecture's scope of operations within the confines of given architectural 'bodies' or predetermined spatial conditions of the city has been questioned; thought has been given to its future as another kind of practice, engaged with the city's spaces.[7] Yet for all these inquiries, the interior is demonstrably a construct of attitudes, ideas, conventions, images and ideologies that are continuous with the public world. It becomes necessary, therefore, to address a greater interior: that condition that pervades the entirety of the thoroughly urbanised environment,[8] with which practice should be critically engaged and active. Avoiding this would fetter the practice of 'interior architecture', and indicate acquiescence to the prevailing neoliberal order, which proposes itself as both inevitable and natural.[9] The effects of this condition of interior are to be found in the public interiors of our cities: spaces that are widely taken by people to be public despite their private ownership; spaces of extremely varied morphological and

topological characteristics, These spaces, which are not necessarily indoors, present opportunities for various agencies of power to project conditions and effects in service of their own purposes. However, these public interiors can be made to resist these projections, and can be made so that they sustain something quite opposite: they can be places where people can become conscious of themselves as individuals, in public, among others.[10]

These projections are pervasive, and the environments that articulate them are everywhere; however, one must seek to make conditions for people — for ourselves — that resist them, and offer the possibility of individual freedom. Several artists have made efforts of this nature, such as Dan Graham and Gordon Matta-Clark, whose critical practices proposed spaces for consciousness, inter-subjectivity and sites for living outside ideology.[11] In the present condition of interior, one is increasingly confronted with the impact––and the dependence––of its economic 'ecology' on 'other lives': on workers who are largely unacknowledged that sustain the city but lack privileges and the status of legitimacy within it, who are situated 'outside'. Ben Judah describes the invisible lives of a parallel population within London,[12] who work in its service and disappear into the crevasses and terrains *vagues* of its peripheries, trying to make money, futures, and places for themselves. One must acknowledge, furthermore—despite one's relative privilege—one's own displacement in the city and its territories, and the limits of one's access to its resources and spaces, the monetisation of activities therein, and the dominance of publicity and corporate interest over public interest, where there is little freedom offered except the freedom to consume. The making other kinds of space, other kinds of interior is both necessary and urgent.

The public interior can be designed to resist its use as an instrument; to resist its reduction to scaffolding for neoliberalism's myriad spectacles. Rather, it can become — as it has been — a stage[13] for people, upon which they can appear,[14] move, act, associate, and become

conscious of themselves and their place in the world as individuals, as selves, as others, as selves among other selves, together and distinct, in public. People can be afforded pleasures of experience and consciousness; they can be afforded the freedom of personal interiority and anonymity; they can read and interpret allusions and representations through which they might occupy other imaginative realms, unbound by power relations. A role for the architect of the interior is to enable such affordances, to build real environments that evoke ideas and themes that at once reinforce experience of the present and excite the imagination. Such acts are essential to the making of material culture, and are perpetually relevant. This is particularly true of the public interior and its condition of interior, wherein individuals are submitted to the fictions woven around them, which can be either coercive and limiting, or allusive and liberating. In the latter case, from the past through to the present, designers have invoked themes both consciously and unconsciously that have suggested gardens, palaces and ruins, great shelters and rambling networks; and so, respectively, origins myths and the return to nature; suites of rooms for the imagination and play; memory, mortality, humility, and emancipation; open realms for everything; freedom of movement and mind and the possibility of possession of the city.[15] One is asked to think of the frisson of contact across social classes in Vauxhall Gardens; of similar encounters in the nineteenth-century *grands magasins*, of the productive misuse of the ruined Palast der Republik, of the spaces for people making culture in the Centre Pompidou or SESC–Fabrica de Pompéia; or of freedom of the city granted to citizens in the sheltered wanderings across the network streets of Paris through the arcades. All these public interiors, regardless of their purpose, have offered opportunities to contemplate the coincidence of the here and now and other places and times; have stimulated interior life and the sense of self; have proposed places to be and to be among others, in the world. All have offered other kinds of freedom.

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Author Biography

Mark Pimlott is a designer, artist, writer, and teacher whose practice incorporates photography, art for public places, and interiors. He is the author of 'Without and Within: Essays on Territory and the Interior' (2007); and 'The Public Interior as Idea and Project' (2016). His built works include ‘World’, BBC Broadcasting House, London (2013); ‘La scala’, Aberystwyth (2003). He is Assistant Professor, Chair of Interiors Buildings Cities, Faculty of Architecture and the Built Environment, Delft University of Technology, The Netherlands.

Mood Indigo

Dinah Casson, UK

Abstract

Dinah Casson revisits INSCAPE, a book edited by her father Hugh Casson and published in 1968 to explore what relevance it might still have for the changed environment interior designers are now working within.

How we have changed. Social media has brought the confidence, to those who want it, to voice opinions on everything. Nothing passes without comment – sometimes perceptive, frequently breathtakingly banal, all posted with equal status. Magazines, blogs, YouTube and so on all offer advice on how to get the look, and how it can be bought online. This is a radical shift from a time, as my father Hugh Casson put it, when art was 'a very wet exercise done by wet people on wet afternoons' to a moment when our hard won status as designers, as respected professionals, appears to be under threat - not because we are wet but because we are redundant'.

Interior design is something that everyone can do – and does. Just as the arrangement of our sock drawer makes each of us into curators, so the lining of our shrinking nests or our workplaces makes us all interior designers. So what is it that we do, as professionals, that allows us to claim that we do more than make linings? In 1968, my father edited a book that he called *INSCAPE The Design of Interiors*. It was a hard copy of a series of articles written for the Architectural Review during 1966 and its aim was to mark out the boundaries of the profession of interior design – to move the perception of it from being something akin to 'the art of the milliner and pastry cook'[1] – to the highly skilled and delicate discipline that it is. It was a consolidation of the work of the programme at the RCA where, since its foundation in 1952, he and his team had begun to carve out a place for this new field. It was also a call out to the architectural profession to acknowledge that this was an area that they were not dealing with very well, that others were and that they should take note.

By the '50s, post-war UK was showing signs of disposable income, and its bruised cities were crying out for the fast-moving skill of putting existing buildings to new uses. As now, everything was changing – ways of working, ways of eating, ways of thinking – and the only people apparently equipped to respond to this were architects, as the illustrations in the book clearly demonstrate. The RCA interior design course

identified this as being worthy of study and began to find and then train people who wanted to do it. Although there were then, and still are, architects who are interested in the interiors of their buildings, the book helped to show how the focus of the interior designer is different, and this is partly to do with the emotional quest for what he described as 'mood.' This may not be an obvious word, but his persistent humming of 'Mood Indigo' as he worked might have had something to do with it.

He claimed that the identification of mood was the first task of the interior designer – to define what he described as the 'secret use of a room…the pinning down of that evasive quality of atmosphere'; after that it was a question of implementation. He grouped examples of mood into five different categories: Idiosyncrasy, Integrity, Ceremony, Geometry, Fantasy, and the photographs illustrated his meaning. I am not sure if he would use the same headings were he to be looking at it now, but the idea still feels useful and relevant, as it pin-points one of the hardest of the interior designer's tasks which is to identify and cradle the often fragile feelings of the usually unknown end-user. This is something that architects can frequently side-step, offering instead the dramatic spatial gesture - that can be magical – rapidly followed by a loss of confidence; fearful of colour and soft things, they scurry back to those comforting modernist pioneers for the fixtures and fittings.

Architecture understandably regards the interior as the shorter-term partner of a project, the sacrificial part of the building that comes and goes like the contents of a drawer. Whilst the host building is the solid monument passed down to future generations, the interior is facial make-up, frequently cleansed in response to changing activities within and ownership without; this forgets that it is the interior, with its messages of style and atmosphere, that visitors touch and feel. It is this that we as users meet and engage with and it is this that determines where we want to be.

Two years ago, my design company was commissioned to design a restaurant; it was to

be our first. But with 25 years of experience of designing exhibitions, we believed that, with our now well-honed skills of creating communicative spaces, we had a fruitful contribution to offer a hungry consumer. The narrative opportunities, both of the building itself and the newly imported chef, were promising, so we were confident that our normal methodology could create a place that communicated much, using narrative as a structure to underpin our design decisions. This way we could avoid the pitfalls of fashion, and taste would be restricted to the food. We were surprised to learn that, in this highly competitive world of cool eating, consumer decisions are apparently determined by an unexpected breakdown of percentages: 25% food, 25% service, 50% design. The quality of food is a given; service is derived from a set of rules that are learnable; but the variable, the unknown, the joker in the pack, and the main driver of success is, apparently, the design.

As spatial designers we were comfortable with re-modeling, re-servicing, re-surfacing, re-planning, re-lighting, re-messaging. But here we were seeking to define the 'secret life of the room' to a brief about conviviality, exclusivity, inclusivity, approachable luxury, privacy and display – and that intangible condition called mood that makes people want to come back.

Looking at my father's mood 'headings', I think we created a quantity of Ceremony, quite a lot of Integrity, with additional Geometry partly provided by the building. Idiosyncrasy is certainly there also. I am not sure if this fruit salad approach is quite what he meant: but his ever-open mind would not have complained, and indeed all his illustrated projects can be read in multiple ways. The point holds though: the space has a mood that is not random, it is carefully crafted with all decisions, large and small, contributing to this, and were made with our customers in mind, as we imagined their journey down the ceremonious staircase, the selection of table, the active moment of ordering, eating, conversing and living the moment. What distinguished this process from our normal design methodology was that the design decisions were charged with emotion.

Apart from the stringent technical aspects,

effective exhibition design is based upon a degree of science – which is rough but helpful; it studies how visitors behave, move, learn, talk, read... and this enables the design process to have a semblance of order. The working practice is essentially non-emotional, where the client holds a measure of detachment even if the content is highly charged, partly because they are not spending their own money, and partly because their career structure demands it. The clients of a restaurant also desire success, but they are part of it and will probably stay with it. The creation of a place made for pleasure is an act of faith, with little science to lean on; the focus is entirely on creating mood and atmosphere. In the absence of a narrative structure provided by objects, chronology or the sequencing of ideas, the process can become an emotional roller-coaster.

At some critical point in the 17th century, architects allowed in the Upholsterer, to deal with the soft bits. The Upholsterer, or Upholder (owing to his propensity to hold up lengths of cloth for approval) provided the soft buffer between the building and the inhabitant, supplying 'Beds, Window-Curtains [and] Hangings and covering Chairs that have stuffed Bottoms'.[2] This marked them out as tradesmen. The Upholsterer designed, and then supplied and fitted - earning their cash from the latter two but not the first. This crucial aspect of the role links it to trade rather than a profession – a trade, now called Interior Decoration, is one still active and still highly skilled at the business of 'upholding' – in order to make linings. It too would claim to be concerned with the business of mood, but generally the toolbox is smaller, restricting itself to surface modelling; this is unlike the interior designer who digs deeper into structure, form and light – as well as surface.

So, who is best equipped to define and find form to express mood? The architect? the interior designer? or the interior decorator? All three would claim capability, but the interior designer may well have the strongest claim as their training and their interest straddles the critical centre ground where technology, vision, empathy, skill and engagement meet.

Fig 1 - Spread from INSCAPE where an outline definition of the six 'moods' is set out.

The architect, being one of the oldest of all professions and whose extended education covers (or should cover) technique and art, science and culture, has the competence to (and frequently the dream to) design everything from the soft to the very hard, and should claim it as they used to; but in reality, they rarely take up the challenge; through lack of time? or fees? or peer group respect? or nerves? And the interior decorator, generally restricted to treating the veneer of a given space, can only create effects. But the interior designer forms the critical link between the fabric and the user, infinitely changing one to suit the other, stretching professional arms to the right and to the left, straying deep into the territory held by neighbouring professions, working closely within engineering, software and hardware, graphics, textiles, text, art, film, sound: the burrowing into ever more specialist fields of work, has pushed the interior designer to learn fast but to remain light on their feet, be quick to respond and to be increasingly serious.

INSCAPE remains a valuable document, both visually and intellectually. It gets to grip with the profound difficulties – and joys – of designing the invisible bits that cannot be tightly defined. We live in times of the loose-fit – from clothes to the urban street and it is possible that it is the interior designer that has the skills, the commitment, the wit – and the modesty - to enable the user's voice to be heard. As my father says: '... human creativeness is not confined to experts, and ... the creation of an interior, like the building of a city, is a process, not an act.' [3]

The mood of a place is where that process is distilled and where it finds form. And this is the part of the process that the digital advisors find hard to reach.

Where does this take us next? We can probably assume that most things connected to human behaviour will not change that much. No doubt there will be developments that we cannot predict, radically changing the way we work, play and live and there is no doubt at all that some

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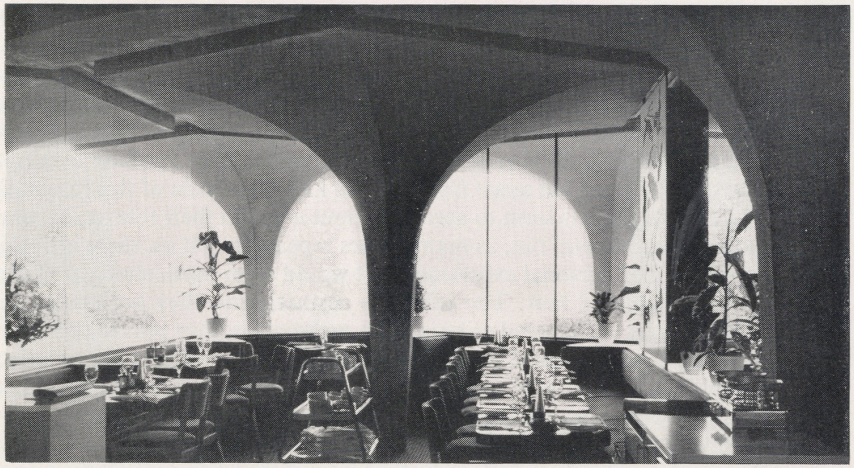

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The five pictures illustrated on the facing page and this page summarize the five *moods* into which the interiors in this book have been grouped.

1, IDIOSYNCRASY Enclosure, a corner table mysteriously reflected, a job-lot of pictures—and so without effort or elaboration a scene is set a particular mood created. (Wilton's Restaurant by Adam Pollock.)

2, INTEGRITY Here bones mean more than flesh, and structure is left to speak for itself in a few strong untreated materials—timber, concrete, brick. This is 'the inside of the outside' (The Elephant House at the London Zoo, by Casson, Conder and Partners.)

3, CEREMONY Here stillness reigns and permanence is the quality pursued. Ranged windows, ruled seats, suspended flags are all ranked in formal sequence to as so achieve what Inigo Jones calls 'graviti in publik places' (The Guards' Chapel, Wellington Barracks, London, by George, Trew and Dunn.)

4, GEOMETRY The delineation of space—fictional or factual—by visual measurement is the main task of the interior designer. Here it is carved from the air by the sweeping cuts of arches which step elegantly inside, outside and back inside again. (The Serpentine Restaurant, Hyde Park, London, by Patrick Gwynne.)

5, FANTASY 'Theatre' and illusion have always —and properly—been part of the interior designer's armoury of tools reflection, sparkle, colour-contrast, mystery and perspective are some of the elements at his command. (The International Jewellery Exhibition, Goldsmith's Hall, London, by Alan Irvine.)

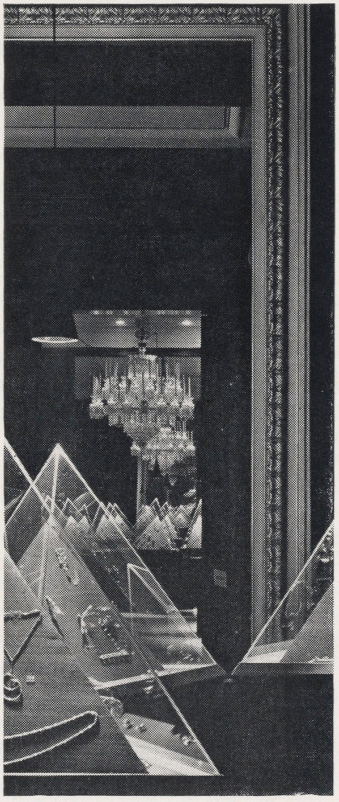

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Fig 2 - Part of the section illustrating Integrity, that concentrates on the idea of 'wholeness', melding the inside and the outside into one.

Fig 3 (Right facing page) - Integrity further explored through the example of the Standard Bank designed by Stefan Buzas using the plan to further the key point - an unusual gesture at that time. The finishes are described in some detail.

MOOD 2: Integrity

AS INTERPRETED HERE, 'INTEGRITY' *means exactly what it, and the dictionary, says —the quality of being indissolubly a part of the whole. It denotes those interiors that have been designed—and are instantly so apprehended—as part of the architecture by which they are enclosed, where the vocabulary of structure is used virtually unchanged inside as well as out. It is not a matter of size nor grandeur The same quality can be enjoyed beneath the white-washed vault of a humble 'trattoria' as under the great sweep of the Pantheon. This is the inside of the outside.*

1, the Standard Bank, Northumberland Avenue, London looking through the main entrance. The sliding grilles are in two tones of bronze, dark and silver. (Architects, James Cubitt and Partners , partner-in-charge, Stefan Buzas.)

2, looking into the main banking hall of the Standard Bank , the seating area is on the left. Inset, in a veneered panel on the wall, is a bronze bank symbol.

To place an interior in this category does not imply that other interiors in this book lack integrity (moral or physical) any more than it suggests that other qualities such as Geometry or Ceremony are missing here. It does, however, imply that the interior is imbued strongly and throughout with a feeling of 'wholeness', from which no separate part can be removed or even shifted without upsetting the balance.
Ceilings and floors run through undisturbed, glass doors are no more than a membrane, furnishings and enrichments are meticulously sited. Throughout the designer plays it cool and with steely restraint. The interior seems to wait—poised for people yet somehow confidently uncaring whether they arrive or not.

Fig 4, 5, 6 (following page spread) - Eneko at One Aldwych, London.
View of the underside of the copper-clad staircase as it lands on the mezzanine level en route to the basement level. All the materials used in the interior - steel, wood, stone and copper - were selected to support the chef's approach to the purity of his ingredients.

Variegated colour of the banquette upholstery, the textured, quarry-like wall and the faux window frames - all devices designed to celebrate the carved out nature of the underground space.

View from street level down onto the mezzanine 'cloud' holding the bar. The substantial steel structure holding the building above together with essential memories of previous incarnations, was exposed, cleaned and sealed.

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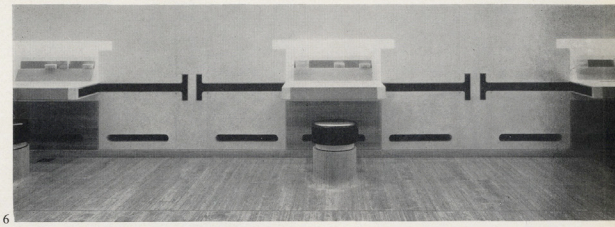

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5 (*facing page*), a detail of the banking counter at the Standard Bank the screen above is veneered in black bean with insets of matt black plastic and mirror glass. 6, the lower banking area. The cantilevered wall desks have concealed lighting. Floor and stools are travertine and the cushions are leather. The wall finish is scagliola with bronze insets. 7 looking through the glass screen into the banking hall.

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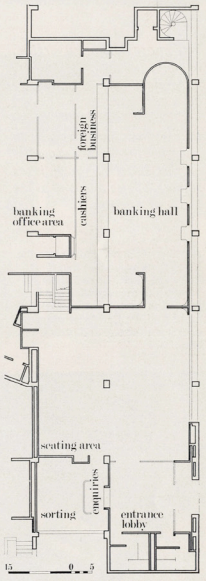

PLAN OF STANDARD BANK

of these will be reflected in the environments we build for ourselves. But, for the moment, we still need homes to live in, hotels to sleep in, shops to touch things in, restaurants to eat in and places to gather; and our clients are going to continue to become increasingly articulate and clear about what they want these places to mean. Just as the architects for the recent Hastings Pier project, dRMM, could see that what they were hearing would mean that 80% of their site would remain empty, all us designers are going to have to open our ears, keep them open and really hear what we are listening to.

Our museum visitors (our true clients) have never ceased to surprise us, and for this we have to let go of some of the authorship and focus instead on becoming master mood-makers.

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Author Biography

Dinah Casson set up her design practice in 1970 and her partnership with Roger Mann in 1984. Since 1992, Casson Mann has focused most of its work on the design of museums and exhibitions. These have ranged from the object-based British Galleries at the V&A through to the digitally based museum at Lascaux in France. During the last 10 years, the practice has designed temporary and permanent installations for museums in the US, Russia, UAE, Italy and in France, as well as the UK. Casson Mann's work has been published extensively and has won numerous awards. Dinah Casson has been involved in design education throughout her working life, both as a writer, lecturer, studio tutor and examiner. She is currently a trustee of the Towner Art Gallery and of the UK Supreme Court Arts Trust. She is also a member of the Stamp Advisory Committee for Royal Mail. With Roger Mann, she was elected to the Faculty of Royal Designers for Industry in 2006 of which she was Master from 2011-2013.

From Hipster to Oldster: Speculations on the Future of Creative Workspaces

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Abstract

With increased life expectancy, and a growing financial need to work longer, our workplaces are accommodating an ever-ageing workforce. This chapter looks at how the workplace of the future will evolve to accommodate and support today's middle aged workers as they reach their 70's and beyond.

In the future, more people are going to retire later and live longer. By 2035 the retirement age in the UK will be 70.[1] So, the Generation X'ers will be working longer than any previous generation, and their working environments will need to respond to the ergonomic changes associated with ageing. How and where they work will directly impact on the interior environments they occupy. The ever-expanding urban landscape, with its reconfiguring inhabitations intended to support our ever-changing society and its needs, relies upon the interior to similarly adapt. This chapter will define the key interior themes that will support this changing workplace environment, speculating on what its interior identity and paradigm will be.

Background

Working patterns are constantly evolving. Since the dawn of the 21st Century, the continued rise of flexible working has resulted in more varied workplaces to support the needs of people undertaking part-time working, job sharing, shift work and home working. The emerging interior landscape is as much about increasing employee productivity as it is about improving the working environment. A 2016 study by Gensler, identified that the most innovative employees split their time between remote and in-office work.[2] In the future, the variety of interior environments and working locations existing, will be as much of a revelation to us as the concept of hot-desking was to the Baby Boomers. During the early noughties the phenomena of the creative hub emerged, with its emphasis on space for work, participation and consumption.[3] It didn't take long for playground furniture and pool tables to become ubiquitous in creative offices.

How will the office-as-playground evolve to accommodate ageing in a way that to date only domestic and care facilities have? Given the more dynamic environment of a creative workplace, the resulting interior solutions proposed will create a new model for both office interiors and multi-generational integration in the workplace. Glancing into the crystal ball of the future workplace, it is useful to consider this impending paradigm as a series

of interconnected elements that will influence these interior spaces.

Themes

Research undertaken by the Helen Hamlyn Centre at the Royal College of Art, on the ageing of the working population, identified that the changing workforce requires a new type of workspace that accommodates the combination of the natural effects of ageing and the more complex patterns of knowledge work with greater imagination, flexibility and ease.[4] It is therefore important to consider themes that are likely to be influencers. Over the past 10 years home working has increased in by a fifth.[5] So, just as work has entered the home and appropriated space and time, the domestic environment has been influencing how offices are designed. In Hermann Miller's living office concept, for example, the definition of domestic and work habitats has blurred. The ten primary modes of work it suggests have names and functions that mimic sanctuary focused aspects of the domestic environment.[6] But we must not forget that a basic human need for a sense of connection with others will ensure co-working environments persist to some degree.[7] However, we need to look beyond just a hybrid of home office and co-working environments for pensioners in 2035, if we want to create successful working environments. Yes, there will be elements of these typologies, but there will be much more beyond. To evolve these design speculations the three interlinked themes of adaption, network and revitalisation, in relation to the physical interior, and the employee themselves, suggest how these will impact on the future workplace.

Adaption

Cities have run out of space. We are inventive and creative in terms of where we locate ourselves for work and the types of buildings and spaces we adapt. People have multiple workspaces that they can use. The home office becomes more responsive to our work needs as we age, as working from the dining room table is no longer the only option. If we think back to our youth and the introduction of the cabin bed, then our beds of the future will be raised up and support our

Fig 1 - Adaption Theme Interior.

workspace below. Our bedroom furniture won't just house our clothes, but contain space for our books, computers and other things required to work from bed. Domestic reconfiguration can also include the bath. Due to a need to reduce water consumption, these commonplace items in bathrooms are redundant for their original use. Rather than strip them out, they become re-appropriated for new functions. Of course, we want to retain that distinction between work and home, so more of our home working environment is hidden away within walls, floors and ceiling. To support this the materiality of our bedrooms and bathrooms changes. Gone are interior finishes specific to each area, and in comes new uses for materials to support the blurring of boundaries. Indeed, the terms bedroom and bathroom will go, replaced by possibly the all-encompassing term 'boffice'. Ephemeral materials such as cardboard will become more imbedded in our interiors, changing the aesthetic of spaces, and allowing for more radical and frequent adaptions to our surroundings. [Fig 1]

Within larger scale offices, more inventive adaptions of existing building types will happen. If we are to believe the news in 2035 we will mostly be vegan and be transported around in driverless electric cars. So service stations and shops are then available for office adaption – or 'shoffices' as they will be called. The rebels of course will probably take to their camper vans and move their office with them, travelling around like a gang of aged office nomads in their personally adapted 'voffices'. Finally, when we talk of adaption we must consider how we adapt specific workspaces to our needs. Currently the variety of working methods are catered for in a range of specific spaces. In the future, these changes will be focused more in one place that we control and adapt to suit our individual needs.

Network

When considering where we work, it is important to consider who we work with. By 2035 there will be more generations working together than ever before. Tomorrow's pensioners are key to this, sharing their expertise with younger workers.

Business are more global and the concept of different time zones are subsumed into our need to do business with other countries. We won't fly half way around the world for that meeting, so when communicating overseas we want our interior to represents our culture, rather than being generic to the world of work. Local identity is stronger as a reaction to our current interior design solutions, which in their attempt to create a new language, will have lost all sense of local or regional identity. This of course is heavily influenced and supported by technology, and we can't ignore how interior design will support this.

The office interior as we currently recognise it evolves due not just to changes in interactions between people, but also in the way that people engage more directly with the physical elements surrounding them. The workplace of the future is much more open in sharing information in a public way, using the interior as a way to connect people through data. It supports our actual interaction with each other, with greater variety of spaces than at present for meeting, conversing and collaborating with colleagues. The walls around us record our moves and interactions, feeding data back to employers and other agencies. Charging of equipment isn't

Fig 2 (Below) - Network Theme Interior.

Fig 3 (Facing page) - Revitalisation Theme Interior.

fixed to socket locations, rather the furniture and walls engage in this process, drawing the interior itself and the function of the space closer together. [Fig 2]

By 2035 technology in relation to interactive screen will have advanced so that fibre optics imbedded into wall paper allows you to change the scenery around you. Walls become our screens, ever changing rather than being static. However, this cannot design out peoples' desire to personalise their workspaces with pictures of things important to them. So a full wall dedicated to colleagues ever changing holiday snaps, data and emails will be commonplace, when workplace interiors are much more linked to the people working in them.

Revitalisation

The final theme revitalisation responds to the older workers' needs to stay healthy, and for interior environments to support key issues of ageing. As the importance of employee health continues to grow, this is translated into more physical integration between people and their interior surroundings. The benefits of 10,000 steps a day are already becoming apparent.[8] Stairs within offices move to more prominent

positions so that they are the easiest way of moving between floors, thus encouraging exercise during the day. Just as cities have cycle and walking paths, then interiors allow employees to plan and track their own routes. They will record how far they have gone, and whether they have met their daily target. Of course, we don't know what will happen if you don't meet your target, but employers could demand a certain level of activity from staff. No more wheeling yourself in your office chair to the photocopier to pick up your printing – it'll be a sprint to the finish. Also of importance to revitalising us during the day is what we eat, ensuring energy levels are high and our minds fresh. Healthy food will be grown in our offices. Gone will be the days of the sad pot plant slowly dying on a shelf. Now the full-on living wall that you can eat will be inches away from you. The final factor in relation to revitalisation is stress. This is a growing issue in the workplace, and one recognised way of dealing with it is to take time away from your desk.[9] UN Studio and social design studio Scape have recently undertaken an interesting study into break out pods that offer a variety of stress-reduction techniques, both active and passive. This allows employees to "physically and emotionally reset themselves".[10] These types of objects form part of the future office landscape, and it becomes commonplace to see people nipping into a pod for a quick reboot. [Fig 3]

Of course, our future workplaces will not be utopian dreams. We also can't unquestioningly

assume that this will be available to all. We currently don't live in an equal world, and unfortunately it is showing no signs of changing by 2035. Whilst the spaces speculated on above are entirely possible, as with all good design, the underground reactions and hacks, carried out by those in less affluent, or in more remote locations, are often more interesting.

However, looking to the future, it would be good to think that a mood board for a creative workplace in 2035 would take influence from key design from the 1990's – when the Generation X'ers were in their prime. So, here's to working into our 70's, but we'll be doing it in a version of the Hacienda and employees will be mad for it.

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Author biography

Rachel Simmonds is the Programme Director of Interior Design at the University of Edinburgh, Edinburgh College of Art. An Architect by training, she combines teaching and practice both in the UK and overseas. In relation to her research, her architectural and interior design experience has influenced a variety of investigations around urban typologies and collaborative working. She uses her industry experience to support her research into the design of future interior spaces, with an emphasis on places of creative working and learning.

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The interior of the future will be abstracted. The chapters in this section imagine future interiors which have become disconnected from traditional categories and understandings. The texts consider the more conceptual dimensions of interiors and interiority through dramaturgy, relations, seams, and ideas. What happens when an interior is stripped down to its bare essence, becomes decontextualised or recontextualised? What is gained and what is lost in the act of remembering and forgetting? And in acts of translation into geometry and generalisation? Contemplating the abstract, according to Wassily Kandinsky, enables one to see the in-between. What happens between the walls, under the floor and inside the cracks?

Interior Futures Abstracted

Hybrid Consistency

Vanessa Lorenzo
Hybridoa

Abstract

What does an object mean when it does not end at its surface, skin or physical limit? When it transcends walls and categories? The incursion of the more-than-human worlds into objects challenges the conventional notion of “the interior”. Moreover, the embodiment of digital technologies into objects opens up a broader concept: the interior as the space where species—both cybernetic and organic—meet together. In the following article, I explain how moss, the first plant that left the oceans to pioneer the land, can inhabit the interior and interface those more-than-human worlds.

Design has gradually abandoned its linear progressiveness and embraced the splicing of disciplines and categories. It has also become entangled with democratic principles, and has gently co-opted methodologies to face the environmental shift with a regard new developments in life sciences, ecology, identity and biopolitics. Meanwhile, contemporary thinkers invite us to fade into a planet inhabited by an interdependent web of species and matters with different dimensions and scales.

Organic Modernism, a term coined by Frank Lloyd Wright (1867 - 1959) and then adopted within Scandinavian Organic Modernism,[1] regards the object as a means of seeking a balance between the human and natural worlds. In Lloyd's Fallingwater house, the facade is encrusted into the rocks of a small waterfall, and the walls interface a creek, creating a perpetual dialogue with the rushing water. However, this approach implied a Modernist way of categorizing nature as something completely independent from the human. Therefore, the object was a mediator between them—something strange to nature, expropriated from the natural world by humans and exclusively human-made. What if, instead, we truly integrate nature (heretofore the non-human or the more-than-human) into the design process and into objects? How to design beyond human standards of beauty?

Through a research methodology that combines critical inquiry with a practice-based design, we experiment with techniques to integrate the nonhuman into our design practice, in order to understand the other, with its particular rhythms, codes and capacities; it is an ethical and a political obligation for designers to be aware of the more-than-human worlds of technosciences and nature-cultures.[2]

When an intervening instrument integrates non-humans, it also emphasises their role in producing knowledge. We realize their agency [3] as what Jane Bennett describes as "thing power" in her book Vibrant Matter:

"[...] not Flower Power, or Black Power, or Girl Power but Thing Power: the curious ability of

inanimate things to animate, to act, to produce effects dramatic and subtle." (Bennett, 2010, p. 56).

Suddenly, things have political weight, sensing capabilities, social capacities and memory to project us far beyond the Anthropocene. To develop these instruments that integrate the more-than-human we require hybrid techniques.[4]

Some time ago I became fascinated by moss. Its pleasant texture and its resistance in harsh conditions was a formal invitation to explore the rich microcosm encapsulated in it. Mosses are wee organisms, with slow temporalities of growth, which can decipher the secrets of life on Earth.[5]

They pioneered the land when glaciers stepped back, preparing the land to be refilled by a rich biodiversity. They welcome life in a modest exchange of moisture and sunlight. Because of their reduced size and simplicity, they can resist harsh conditions by constraining their rate of growth, and have become one of the most efficient organisms on the planet. In times of drought, they enter a suspended animation state (anabiosis), surviving for years waiting for the water to come back.

They can also tell us stories about our alienated nature, and help us decipher life's future on a damaged Earth and beyond. They act as a nexus between worlds: inhabiting extreme environments, water streams and skyscrapers, hosting microbial life-forms that have proven resistant in outer space (tardigrades or water bears). Because they lack a root system, they are fed by everything carried by the wind—including pollutants—so they also connect the sky to the ground.

If we consider them as texturized matter, we can also appreciate that they are a dense web of filamentous, smooth and fresh surface, pleasant to interact with through physical contact or just the sense of smell. After some years of experimenting with the material specificity of moss, in 2017 I was invited to design an interactive

installation in the context of an experimental sound festival called *Klangmoorschopfe* in Gais, Appenzell, Switzerland.

The *Schopfe* is a wooden hut with plain façade and a roof that ends at the same length delimited by the vertical walls. The wood for the construction of these centenary houses was cut during the waning moon when the sap in the trees is at its lowest. This technique avoids cracking, splitting or warping, as well as infestation of insects. It involves no use of toxins, and thereby creates a lower carbon footprint. [Fig 1]

With my collaborator Raphaëlle Mueller, I worked on a concept of "bringing the outside inside", allowing the exterior world to settle in the interior world. Inspired by Andrei Tarkovsky's films, in which the rain repeatedly appears inside rooms, we allowed the mossy couch and the running water to recolonize the space, the floor and the furniture: the chimney, the table, the bench, etc.

On the table was a *Mossphone,*[6] moss with a cybernetic add-on. [Fig 2] A metal thread was carefully sewed into the moss, creating a highly conductive body, that changed depending on its density, humidity, and the toxic particles that might be trapped in the mini-branches of the moss. When caressed, the cyber moss varied its capacitance, altering the flow of electrons within the wires travelling towards the computer. A freshly-watered moss would be more reactive to its environment, giving a richer, more interesting palette of sound. An algorithm used this data to modulate a characteristic noise of the area: a wolf, a water stream, mesmerizing insects, etc. This media ecology enabled a dialogue that was performed differently at every location: Moss under the polar caps of Siberia, the pure mossy couch of Appenzell (Gais), your local moss companion, moss in the immediacy of the nuclear reactor of Fukushima.

In the façade of the building, a tube connected the water reservoir located at the feet of the Schopfe (to accumulate rain for the cows) with the interior. A fluorescent tube went through

Figs 1-4 - MossPhone-Installation (Photo by Raphaëlle Mueller).

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the little rounded window inside the dovecote for wild birds, down to the ground floor. Hanging from the ceiling, the tube ended in a second-hand spherical crystal, traditionally used for fishing in the lake nearby.

Water drops travel through the tubes, as sound waves through air, filling the interior of the old wooden hut. It feels humid, yet cozy and magic, though a little bit disturbing because one might feel the necessity of walking with extra care, with the slightly guilty feeling of having stepped on some else's head. This feeling might continue when leaving the interior, as the moss is omnipresent outside of the schopfe, and we have now experienced a more-that-human landscape—a multispecies ecosystem of which we are not the only part. This interweaving of matter and events through time and space might require us to step back and take a deep breath. We go back to 1985, to excavate the legacy of *Six Memos for the Next Millennium*. In the lectures he prepared for a seminar in Harvard, the postmodernist author and philosopher Italo Calvino foresaw a set of qualities for future generations of writers and artists: lightness, quickness, exactitude, visibility, multiplicity and consistency.[7]

His openness and multicultural approach enables the appropriation of his memos by designers. His last unfinished lecture, on consistency, only exists as a draft, but it might be, along with multiplicity, one of the most relevant hints to understand design in the context of an ongoing global shift. Objects, like novels, should embrace their multiplicity as an encyclopedia, a method of knowledge production, and a network of connections between the events, people and things of the world. Here I understand the inherent interactivity of the object—electronic or not, analog or digital—the capacity of the object to emit information and exist in a more than physical world. Its mediation, its "augmented" reality, the experience that this object enables and that goes beyond observing it, owning it or using it. Calvino also gives a powerful notion of consistency when he describes how "certain properties of the birth and growth of crystals

resemble those of the most rudimentary biological creatures, forming a kind of bridge between the mineral world and living matter." This hybrid matter would simultaneously be living and nonliving, emitting a certain frequency generated by relentless internal agitation. It is wrapped in a permeable membrane from which spectral forces come in and out.

The installation and experiments described in this text are ongoing processes: whether finished objects or not, they imply an action that develops over time—a temporality given by the non-humans included in the creative process of the object: a plant, a mineral, a community of bacteria, etc. This implies a certain relationship of care over time, and awareness of the requirements of the non-human, which is, in part, the matter from which the object or installation is made.

Different from Organic Modernism, here the object creates harmonious links with nature because the object is nature—it is an inherent part of it. For me, this implies thinking through matter during the creation process, to acquire skills in order to be able to understand their characteristics and needs (consistency). For the observer or user, it may also offer the possibility to realize the ties and powers that link them to the technosphere (multiplicity).

The incursion of the more-than-human worlds into the object challenges the conventional notion of "the interior". Crucially, the embodiment of digital technologies into the object opens up a broader concept: the interior as the space where species –both cybernetic and organic, meet together and urges designers to explore how they affect each other.

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Author Biography

Trained as a media and product designer, Vanessa Lorenzo is a designer working at the crossroads of Art & Science. She includes biology and biotechnology in the design process, and speculates on its critical influences on our society. through interactive interfaces and workshops. She holds a degree in industrial design engineering (Mondragón, Spain, 2008), a postgraduate in product design (Elisava, Spain, 2010) and a Master in Media Design (HEAD-Geneva, 2016). Currently, she is an independent designer and researcher at Hybridoa, and collaborates with Raphaëlle Mueller (XGBML project), Utopiana, Hackteria, Open Science School and is currently co-president of the Hackuarium bio-hackerspace (Renens, Switzerland). www.hybridoa.org .

A Spatial Diorama: the Act of the Interior

(a five act play)

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Abstract

In this chapter we propose that interior design should be presented more as a transitional act or staged performance than a static spatial practice. Stage design and the dramaturgy of performance utilise many temporal and spatial place-making techniques that enrich the deployment of narrative experience. We advocate a new theatrical consideration of interior mobility through the exploration of spatial location and fluidity of performance in relation to site. Whilst recognising the lithe flexibility that interior design can offer, there are deeper, more human instincts that can be learnt from stagecraft and its performative and interpretive narrative. This spatio-performative nexus will empower the interior, draw together the sequential dynamics of performance structure and craft new interpretations of spatial enclosure—where future interior experience will be found. Using the compositional methodology of theatrical performance, the interior will be considered as a series of permeable and semi-permeable scenes defined by the membranes of the built environment, which cohere the interior narrative. These spatial arenas form as a series of spatial 'acts' that seal, protect and build experience in the interior. This will encourage interiors to become more transient, portable and interchangeable, building the moments of the interior journey through the performance of interior participation. We define a new compositional theory for the interior, supported by diagrammatic and photographic scenarios which demonstrate the sequential interior narrative of the five-act play.

Fig 1 - Spatial Diorama, by L. Marlor & R. Adams, 2017.

The building stands fixed and immovable—monumental and constant, its next incarnation imminent. Architecture is at a standstill, there is limited exploitable land left, this is not the utopia that was once predicted.

As we move towards an unprecedented degeneration and absence of usable space in the urban realm, we must re-consider and re-conceptualise our understanding of space. Common abstractions of space are notably static and concrete. However, designers of the future may be forced to design within sites which are unfit for purpose, without traditional interior boundaries, previously uninhabited by human populace, and those which are impermanent or ever-changing. As a result, we must further define and delineate between ideas of space, architecture and interior. Architecture is seen as the repository of objects and the physical realm within which we operate or exist.[1] Architectural skins provide boundary and shelter and act as permeable arenas for the dynamic spatial activities that occur within. As Grosz [2] suggests, buildings do not "function as finished objects but rather as spatial process, open to whatever use it may be put to in an indeterminate future, not as a container of solids but as a facilitator of flows."

These aspects, compounded, lead to subtle distinctions between architectural shell and interior space. As architecture remains solid and stationary, the interior realm can be viewed as enveloping the user whilst following their movement. As Lefebvre suggests, "In philosophical terms, space is neither subject nor object."[3] The interior, instead, spans the gap between the solidity of architecture and the motion and performance of human activity.

Spatial encounter, then, can be viewed as being experienced solely via the interior. Holl[4] describes a "hidden thread" that, whilst binding the interior to the site, helps express the fluidity of spatial phenomena through interaction and engagement. With this in mind, the interior can be viewed as a kinetic, integrated mobile experience. [Fig 1]

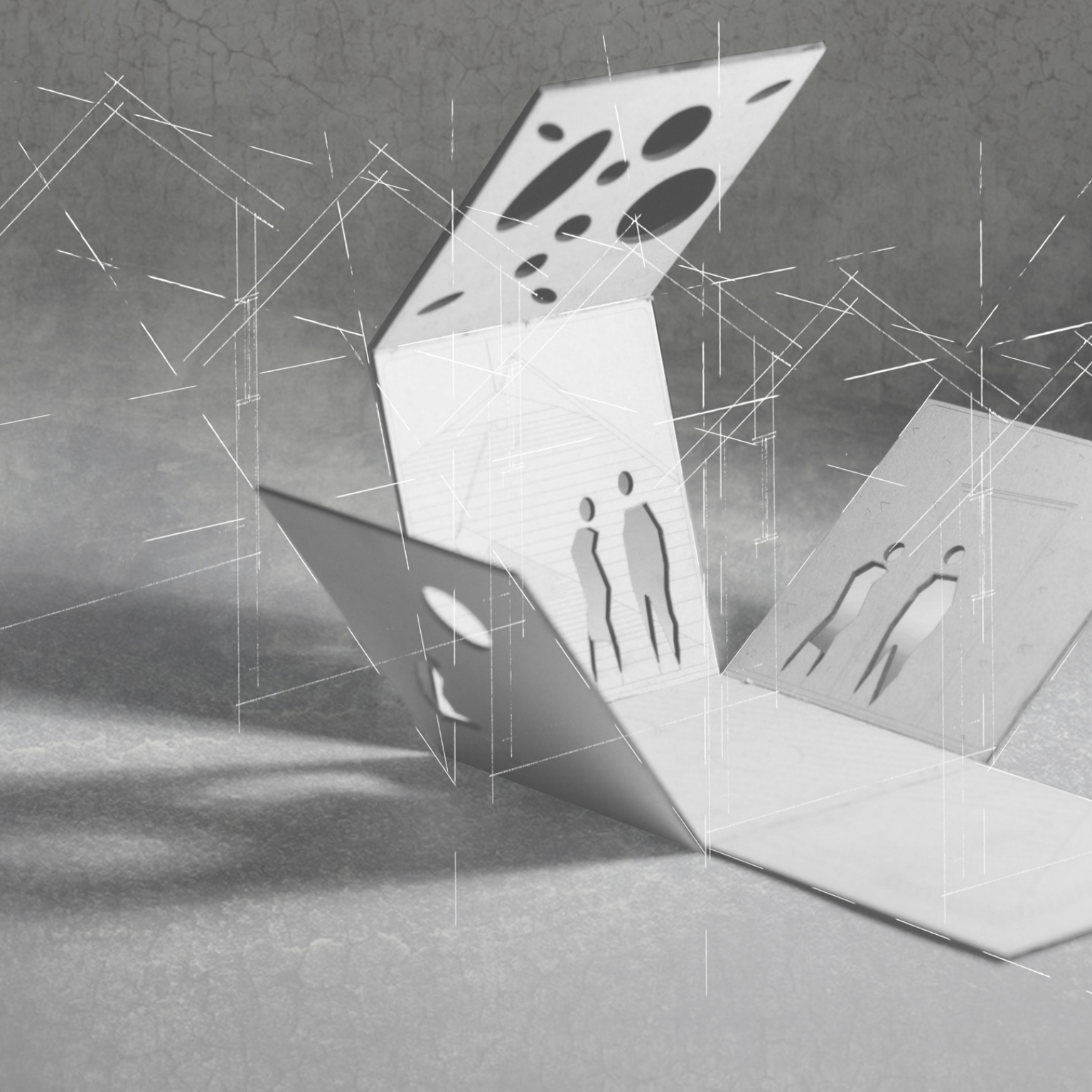


Fig 2 - Axial Interpretation of Space, by L. Marlor, 2017.

The interior naturally holds a centralised position in human anthropology as it shapes the membrane between the architectural and human experiential realms. It has the freedom to reflect and direct human activity, but, has the capacity to drive ambience, mood and critically, spatial atmosphere. Future interiors will need to continue to migrate from within architecture. Embracing other spatial cultures and creative theories will ensure they retain centrality and interpretation within the urban realm.

Dramatic Proposition

Interior design has long been considered a critical and spatial ally of performance. The stage action is driven by a structured narrative of human storytelling performed by actors, supported by a temporary set environment. This frames and empowers the stage to determine experience and strengthens the importance of sightlines and spatial emphasis.

Acting focuses attention and proxemic experience to a particular area, highlighting the inter-relationship between the actors, human occupants and the building. This process is enhanced with the use of various theoretical methods that help change the nature of theatrical experience. Stanislavski[5] promotes the use of emotion and reflection as tools to enrich the journey between the inner experience and outer embodiment of the actor in space. This integrated approach is expressed through a process of spatial "blocking", defining authentic experiential performance from the narrative and its relationship to the environment.

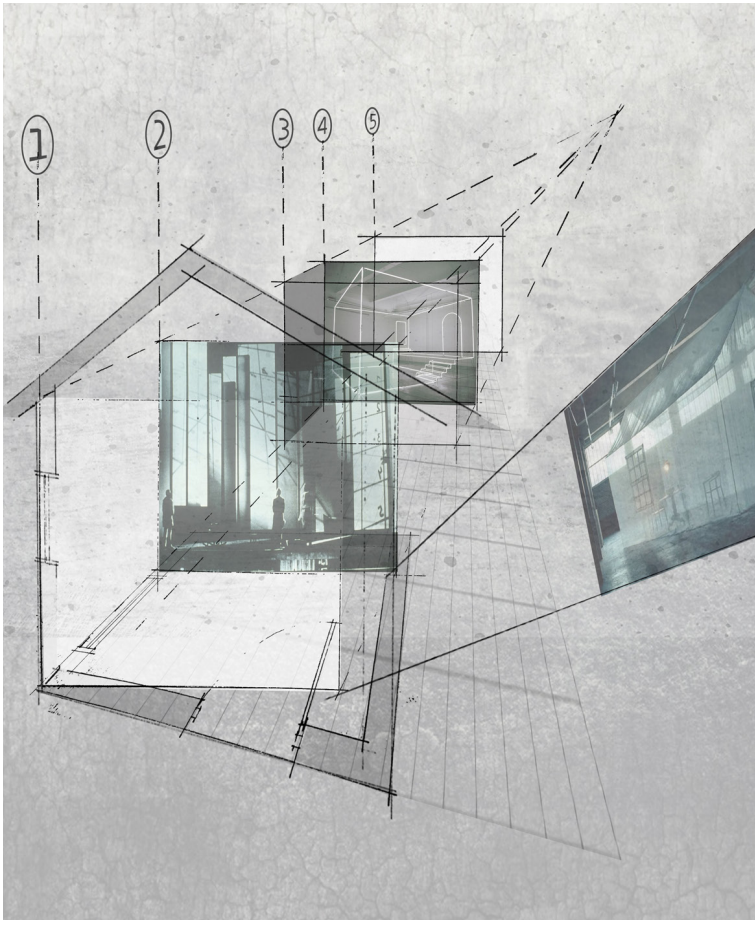
By using this as a trigger, a form of conceptual spatial shroud can be considered that wraps around the occupier. Essentially, the interior becomes mobile, as it follows and encapsulates its human anchor and structures outwardly experiences with the environment and society. Interiors in this future could be heightened and enriched with a new dynamic interpretation, based on human experience, stagecraft and dramaturgy.

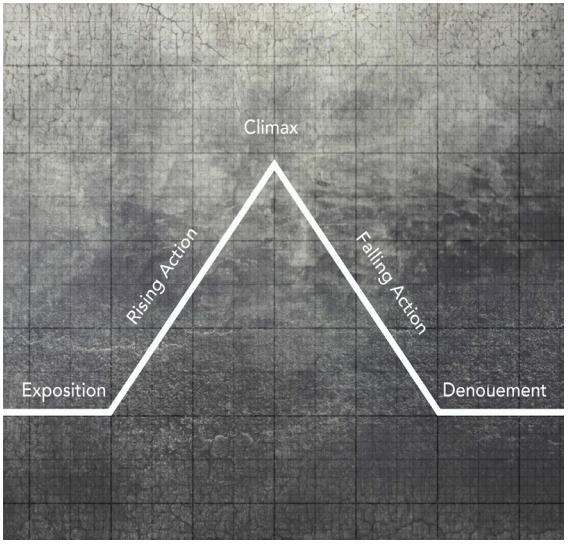
Dissolving the rigidity of the perceived architectural perimeters of space creates an

opportunity to envisage a fluid, unrestricted interior mobility and a deployment of narrative experience. Using architectural site as reference, the new proposed interior act is still harboured by the site and the urban context, but develops a new freedom and independence through an emergent theatrical composition.

The interior is commonly represented in still image or orthographic drawing. However, let us instead envisage these interior "moments", linked together in a sequential series of "acts", held together by the chronological deployment of the interior narrative and user experience. These "scenes", held together by the narrative axis, now make up the interior "event", as opposed to previous conceptions of the interior as a static internal membrane to the host site. [Fig 2]

We can liken this form of the interior to Freytag's pyramid structure of the 5 Act play.[6] This sequence of sectional acts encapsulates the theatrical plot and categorises characteristics of the structural make-up of the performance.





Diagrammatically, these static acts cohere the interior collective experience, as the user navigates through the narrative timeline. [Fig 3]

Act 1. Opening (exposition). Arrival Prologue: The interior experience begins. This opening act contextualises the spatial sequencing, which sets out the layers of the experience and a pre-arrival stage. Context is suggested with the introduction of historical and cultural background, via the host site. The introduction of architectural characteristics and urban identity help the viewer with initial observations and placemaking. The rationale for the experience is contextualised and placed into a cycle of expectancy and caution. At this stage, the interpretations of host site are purely visual, creating apprehension and anticipation of the deeper sensory experience to follow.

Design considerations: exterior streetscape, sightlines, architectural identity and arrival threshold.

Act 2. Encounter, conflict and convergence (rising action):
This act explores the encounter with the architectural fabric and how this impacts on the interior experience, both externally and internally. The user is propelled into the interior journey, initial encounters with the host site begin to build, and the physical enclosure of

Fig 3 - Freytag's Pyramid of the 5 Act, by L.Marlor, 2017.

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the architectural shell is experienced. The advent sequence moves through the arrival and the power of the entrance. The architecture shapes the first impression, but the interior sets the scene for the encounter. Observations of volume, light and acoustics are absorbed and impressions are created. An array of interpretations follow, as experiences build and the interior reveals itself. There are conflicts drawn between the building and the internal dressing. The human senses are straining to be able to initially absorb the interior values and composition.

Design considerations: volumetrics, spatial sequencing, horizontal and vertical planning, division of space, openings, doors, windows, voids and apertures.

Act 3. Suspense and Spatial Experience (climax). Phenomena:

Rising action opens a spatial dialogue creating suspense, interest and tension in the space. Full immersion and interaction with the interior ensues. This act introduces the context of other human users and creates interaction with user and space. Habitational experience starts to build unique, proxemic and tactile values which contribute towards a rising understanding of space. Observations become opinions, decisions and assertions. This is the first time there is a perception of atmosphere, the user is at their most absorbent and porous at this point.

Design considerations: use, occupancy, circulation and proxemics.

Act 4. Resolution (falling action). Spatial Interactions:

This segment of the interior narrative happens as a result of the climax. The interior has been revealed and habitational qualities experienced, rather than observation and first encounter in the initial stages. Our perception of the interior changes as we experience increasing amounts of time within it. This act highlights the weaknesses of human familiarity (and contempt) of space, and starts to document how humans reconsider and alter the condition they occupy. This act of falling action occurs

Fig 4 - Interpretations of the Future Interior, by L. Marlor, 2017.

when spatial experience is understood and the story resolves.

Design considerations: tactility, surface, haptics, texture and ergonomics.

Act 5. Atmosphere and Egress (denouement): In the final part of the spatial narrative, the experience is completed and reflected upon. The relationship between the interior and the architecture are re-examined. The key elements of the experience are drawn together and the important elements are identified and relished or rejected. The interior event is brought to a close.

Designer considerations: Exit, portability, collapsibility, longevity or removal of the interior elements.

This conceptualisation of interior experience creates a more temporal, transferable and portable interior, which can respond to the fixed and heavily saturated nature of the future built environment. The design of the future interior will be less transfixed with dressing, manipulation and creation of objects. Instead, the focus will be the prediction of plot and the speculative star gazing of interior narratives. Not just a static inanimate entity, the interior has a beginning and an end, thus evoking life, linearity and journey. The interior will be less anchored by site and more user-centric, both in its experience but also through its design. More temporal methods, tactics and materiality will be employed to create the future interior "event". This will be inserted and removed by the opportunist designer and participator, into the ever-changing exploitable pockets of space, within the diminishing urban landscape of the future. [Fig 4]

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Leftovers

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Abstract

In the postindustrial city there are more and more indoor and outdoor, private and public, abandoned and used spaces, all belonging to the family of *unlikely* spaces. Among these unlikely spaces, we might include a number of places that we could call *leftovers*. They may represent an incredible resource, not only as places available to perform new functions, but also as keepers of human memories and stories that would otherwise be lost. The challenge is to experiment with solutions capable of assigning to these spaces new potential uses through reversible installations. Through the design of the unfinished, the leftover floors everyone, rather than seducing. It does not wink. It gives shelter to the nomads of the third millennium.

A specter is haunting the world–the specter of leftovers. In the postindustrial city, there are more and more indoor and outdoor, private and public, abandoned and used spaces, all belonging to the family of *unlikely* spaces. It is extremely difficult to predict their future options, given the speed at which the "logics of utility" change nowadays.

Among these unlikely spaces, we might include a number of places that we could call *leftovers*. Places that ceased to perform their original function now find themselves without citizenship, in a state of suspension and await: areas that, economically speaking, are not attractive enough to be considered by property developers, unlike the big abandoned industrial ones, nor of such historical or artistic value to deserve being restored or returned to their original condition, yet not to be regarded as waste, deserving an inescapable destiny of death. Therefore, *leftovers*.

Nonetheless, these *leftovers* may represent an incredible resource, not only as places available to perform new functions, without any further land consumption, but also as keepers of human memories and stories that would otherwise be lost. Through their reuse, an invisible city can re-emerge from time, the one that everyone remembers, imagines and dreams about, but that escapes conscious attention. The liveability of spaces depends not only on rational and functional aspects, but also on values and meanings, allowing people to feel for these places a sense of belonging, to recognise and include them, even if temporarily, in their own inner maps. Hence, the idea of bringing these places back to life may be a response of great symbolical value – although a quantitatively partial one – to the question of the future of interiors in post-industrial societies.

In this view, the culture of interior design may work as a driver by adopting an innovative, original approach to design, different from the one typical of sectors like building restoration and renovation. The challenge is to experiment with solutions capable of assigning to these spaces new potential uses through temporary

and reversible installations, as long as these are consistent with the nature and *soul* of the place, facilitating their reintegration into the living social fabric and enhancing their symbolic content.

From a transdisciplinary perspective, it is a matter of embracing as a "gift" all those elements of deterioration in the existing works and translating them into the project as a language able to explore the depth, irrespectively to the duration of what is displayed. This way, the *leftovers* project gains a broader value, if meant as experimentation of a discipline at the boundary between interior design, arts, restoration, exhibition design and set design. Its aim is to invent – while continuing to work within the best interior design tradition – a new tradition founded on what might be defined as "aesthetics of leftovers". Better still, we might speak of "design of the unfinished" as a perspective to give environments a representative *trait* of the conditions of temporariness, precariousness and transculturality typical of the contemporary age, no matter what their function might be.

Let us consider what happened in the world of art in the transition from the fifteenth to the sixteenth century. Leonardo, Brunelleschi and Alberti's works represent the former, by the rediscovery of the ancient, by the values of proportion and measure, by the idea of the human being as centre of the universe, by mathematical and geometrical rigour. The latter rather is characterised by a continuous exploration and experimentation, marked by a constant sense of anxiety, as well as by a lack of points of reference, even with regard to past history; and by the "centrality of doubt". These are values masterfully interpreted by Michelangelo, especially during the last years of his life, with his choice of the unfinished. As Giulio Carlo Argan stated, Modern critics see in Michelangelo's unfinished sculpture the supreme moment of art going beyond its own technical limits (...) Since then, with Mannerism and Romanticism, all art expressions were constitutionally unfinished and, overcoming the bounds of their discipline, they questioned the prejudice that the finished was the necessary, identifying feature of value.[1]

Fig 1 - R-ZERO Alejandro Zarate de la Torre, Edgar Velasco Casillas, CDLE Offices, Mexico.

We still do not know what historical events will mark the rest of the twenty-first century. However, what happened during its first fifteen years led Luciano Canfora, a perceptive Italian historian with a deep knowledge of classical culture, to state that, due to unstoppable migratory movements and the spread of new forms of slavery, the problem faced by this century is "to rebalance, as quickly as possible, the unfair distribution of wealth." Without this, the conflict for survival (in all its shapes and forms, including the unbearable living conditions of metropolises) will be the main feature of the decades to come.[2] This has much to do with the issue of the identity of places and the change of perspective with regard to the concept of *interior*.

Nicolas Bourriaud, the contemporary art critic, considers the attempt of postmodern multiculturalism to propose itself as an alternative to modernist universalism a failure. The failure is due to the obsession with the concept of going back to the roots, as an attempt to build identities capable of enduring the process of eradication brought on by capitalist globalisation. To this, the art of the late twentieth and early twenty-first centuries seems to hold a totally different perspective, also due to the appearance of immigrants, outcasts, tourists and urban wanderers as dominant figures of the contemporary culture. These are the type of people that such regenerated leftovers propose themselves to, envisioning unexplored ways of living.

There are examples where a design approach like the one highlighted above reached significant outcomes. This is the case, notably, of the 2014 project CDLE Offices by Studio R-ZERO, in Mexico City, to turn an abandoned twentieth-century space into offices. As the designers stated:

it was originally intended to house multiple dwellings but in its long life has sheltered from the headquarters for the United Mexican Booksellers to a pastry shop. All that previous experience is precisely what gives it a particular personality and makes its interior space unique.

CHINATI

Fig 2 - Brandlhuber+Emde, Burlo:, Antivilla, Blick Zum See, 2014, Phot by Erica Overmee.

As it happens with a real individual, the building acquires its character through its experiences, almost empirically, and hence its distinguishing marks, scars, wrinkles, which in this project will not be erased or cleared, but will be part of the expression when gaining a new use, one more chapter in its rich life.[3]

Those who will work there will not feel like being in an anonymous, aseptic though efficient machine for intellectual jobs, but rather a place where the scars left by time are the precious tracks of past human stories.

In the case of *Antivilla* in Berlin, by Brandlhuber+Emde, Burlon in 2014, a subdivision of the interior space into areas was possible, based on climate needs, thanks to transparent PVC curtains. During summer, the curtains delimit only one 10 sqare metres of bedroom within a big open space of 230 sqm, while in winter the heated area decreases to only 60 sqm and the bed is moved near the fireplace. As the author states:

here the raw material does not represent an idea to which it is subordinated: it rather highlights its ability to create new realities and scenarios of use. It is not a question of 'bluntness' of the material, but, so to speak, of the material as pure state of aggregation.

Living in this place means accepting the idea that the interior, by means of a sort of "degree zero of writing" and the celebration of the aesthetic value of the pure state of the material, is no longer the sphere of privacy and "its case", as Walter Benjamin wrote, but the setting of a daily drama of which every one of us is author.

St. Miquel 19, by Carles Oliver, in Palma de Mallorca, is a refurbishment project developed in 2016 with a €18,000 budget that aimed to bring empty homes back into use for people in need—currently a huge problem in tourist areas like the island of Mallorca. The project is based on the following principles:

1. Not to do, as the best way to do.

Fig 3 - Carles Oliver, St.Miquel 19, Palma de Mallorca, 2016.

Fig 4 - Luciano Crespi (leader), Urban Leftover, Green Street, via Lambruschini Renovation Project, Milano, 2013, Watercolors of Marino Crespi.

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2. Domestic Archaeology—to learn how economy of means has built our cities for centuries.

3. Back to Arch, as a way to open spaces without adding any kind of new materials. Opening a door is not the same as building a door.

Every crack, fragment, and track of the past in this leftover turns into a powerful medium of a new aesthetic code. Living here is like living in a memory. That, as Freud thought, is never just a repetition of what has been, but also a reinterpretation, a need to make it alive again. Through the design of the unfinished, that uses metaphors as a means to give symbolical meaning and quality to living spaces, the leftover floors everyone, rather than seducing. It does not wink. It gives shelter to the nomads of the third millennium. It avoids any polished image to take the shape of the unfinished, of the inconceivable.

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Author Biography

Luciano Crespi is Professor of Design at the School of Design, Politecnico di Milano. Former member of the Phd Faculty Board of Design; Head of the International Masters in Urban Interior Design; and Head of the Masters in Exhibition Design through November 2017. He was President of the Interior Design study course at the Politecnico di Milano from 2009 to 2015, and a member of the managing board of the Società Italiana del Design until 2015. He served as Editor of the book *Design Innovations for Contemporary Interiors and Civic Ar*t (2016), published by IGI-Global (USA).

GAZEBO BAR
VISTA 3
VISTA 4
VISTA 5

Towards Seamful Living

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Abstract

This chapter proposes a seamful design strategy for designers working on new visions for the future home. It takes, as its context, the enduring appeal of minimalist technologically enhanced interiors. We explore the attraction of 'seamlessness'– the effortless inter-operability of a domestic ecosystem and its fantasy of unproblematic control – and identify it as a kind of magical thinking. Our aim is to draw attention to the complex and disruptive elements that have been simplified and effaced in these interiors. Beyond interior practices that have potentially become benign and bland, a seamful design strategy re-engages designers with the spirit of radical design and philosophy which acknowledges complexity and difference.

Fig 1 - Aspirational, minimalist technological futures – the simplified, continuous surfaces of early twentieth century Modernism and the 1960s Space Age are re-born in the "ideal" uncluttered home proposed by mindful living and ambient, intelligent technologies. Photographer: Barry Curtis.

How do we want to live?

Many people live in domestic interiors that are compromised between the 'ideal' uncluttered home suggested by mindful living and ambient, intelligent technologies, and more apologetic, hybrid households that incorporate useful devices, ornaments, mementos and unclassifiable 'paraphernalia'.[1] The ethereality of the digital home,[2] where owners can conjure light, music and other pleasures by command and gesture, has coincided with a powerful intellectual investment by theorists – including new materialists, object-oriented ontologists and post-humanists – trying to comprehend the mysterious nature of objects, their capacity to define their users and supplement them in complex networks of interaction.[3]

This chapter seeks to understand the appeal of new forms of minimalist interiors, from their roots in the early future aesthetics of Modernism to contemporary relationships between homeowners and the biddable, self-aware services of 'ambient intelligence'[4] and the 'smart home'.[5] Here we are talking about the bourgeois home – a consciously 'curated' interior.

Our focus is on the promise of 'seamlessness' in the domestic interior. Descriptions of the Internet of Things (IoT), and its potential to embed 'intelligence' and create connectivity, widely use this term to describe the effortless inter-operability of a domestic ecosystem. In a realm that evokes telekinesis, telepathy and biofeedback, this fantasy of unproblematic control generates for us disturbing simplifications of the complexities and contingencies of social spaces and the conflicting interests that exist within them. Seamlessness promises a relief from the anxiety of witnessing joins, cracks, delays and discontinuities. It serves to remind us that the architect and designer have always borne a responsibility for managing awkward transitions and orchestrating satisfying "wholes". The crux is this: seamlessness hides how things come together, and as such, is a form of magical thinking.

We argue for a more *seamful* engagement with the domestic interior; one which recognizes how different material entities, their affordances and related phenomena come together in particular scenarios and how their reconciliations work.

Minimalist (past) futures

It is characteristic of technological futures that their interiors are presented as simplified, continuous surfaces. The founding principle of early twentieth century Modernism was the primacy of functional, logically-conceived spaces – a 'machine for living in'[6] that purged the contradictions, ornamentalism and time-haunted spaces of previous generations.

There are a number of objections to the Modernist minimalist interior. Some relate to the ways in which it tends to conceal its means of production. Rejecting the fetishization of white walls and simple planes, the skeptical architectural writer Reyner Banham focused attention away from this 'well tempered environment'[7] to what went on 'behind the walls' – the concealed devices and gadgets

that sustained a sense of control. There is a relationship here to the 'baring of devices'[8] formulated in those early decades, by Russian Formalists and the German avant-garde playwright, Berthold Brecht. This was intended to serve a political function in refusing to mask the signs of construction and evidence of labor – in essence refusing to do the work of capitalist ideology. Other objections relate to minimalism's obfuscation of the complex ways in which material things are invested with memory, establish infinities and provoke playfulness – especially in the creative realm, hinted at by 'thing theorist' Bill Brown, as 'misuse value'.[9] In other words, using things in unexpected ways.

Ironically, current ideals for living coincide with some of the 'futures' of the 1960s Space Age and radical architecture, which emptied out the furnishings of consumer culture to provide minimal and playful *New Domestic Landscapes*.[10] Often modeled on vehicles, space capsules and exploratory units with interiors 'built in', they emphasized nomadic living. In some cases, the interior was a continuous, engineered space with 'furniture' restricted to tools for enhancing awareness and experience.

Variants of these earlier futures are also re-born in the holistic aspirations of the 'Quantified Self' movement[11] and in New Age mindfulness.[12] Empty spaces are seen to serve the needs of meditation and other forms of self-actualization, and are ideologically opposed to accumulation, disorder and the idiosyncratic 'stuff' of everyday life. 'Decluttering'[13] is widely promoted as a route to creating a more wholesome environmental awareness – a political response to unfettered materialism and a sign of efficiency and mental health.

In the realm of ubiquitous computing, Mark Weiser and John Seely Brown addressed the problem of information overload and annoying digital alerts. Writing in the mid-1990's, they predicted, 'Calm technology may be the most important design problem of the twenty-first century… We must learn to design for the periphery so that we can most fully command technology without being dominated by it.'[14]

Subsequently, the domestic environment has been transformed by Ambient Intelligence (AmI), which is 'dissolved' in to the background, or even naturalized in the everyday objects and surfaces of the home. It is intended to inform without over-burdening, and seeks to be 'self-aware' – capable of communicating, and hopefully resolving problematic issues.

Minimalism and mindfulness could be seen as an obstacle to a fully implemented capitalist culture, and yet industry-led notions of 'encalming' technology enable us to deal with so much more of it, promising a future of endlessly serviceable consumer desires. Instead, the ideology of 'calm' emphasizes wellness and a feeling of being at *home* – comfortable, located, in control. It also focuses the responsibility of the designer in facilitating *coping* rather than drawing attention to, or challenging the contradictions and limitations of a culture of consumption and the Information Age.

Command and control

Habitats of the future have traditionally embodied two commonly-held fantasies: escape from the material frustrations of everyday life, and the desire for a fully-serviced existence – often where quasi-autonomous objects are magically responsive to human control.

We can see how this ideology is furnished and packaged in the branding of AmI and the IoT, with terms that evoke emotional engagement, like nook, den or nest. Nest is a comforting name for a system that suggests safe containment, but records and learns from sensory data, relaying information to remote servers in the digital cloud, where it is cross-referenced with others in vast databases, exposing the domestic to global surveillance. Barriers to full implementation of the IoT include data-security worries – made real by cyber-attacks like the 2017 hack of domestic products including web-connected toasters.[15] Whilst playing into a culture of fear, events like these have enabled providers to promote more digital services – for instance *'security patches'* as *fixes* for what's dubbed 'KRACK vulnerabilities.'[16] In this age of

Fig 2 - Seamlessness as magical thinking – the effortless inter-operability of a domestic ecosystem is a fantasy of unproblematic control, generating disturbing simplifications of the complexities and contingencies of the future home which is integrally connected to the cloud and exposed to global surveillance. Collage by Naomi House.

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connectivity, the fantasy of personal security and control can only be maintained by a fallacy of separation: Like advertisers, designers too easily take on conservative roles – shoring up traditional binaries of home/world, inside/outside, friends/enemies and control/chaos.

The big shift with Ambient Intelligence and the Internet of Things is personalization, where comparative sensory data enables homeowners to be offered optimized services, resulting in 'a new wave of innovation'.[17] Media scholar Mark Andrejevic draws attention to the way this 'digital enclosure'[18] is self-re-enforcing, and how its asymmetric power relations work in the interests of commerce or government. For designers, this troubles notions of affordances designed to guide attention back to the control of the user.

The magic of service

The smartness of the home, with its fantasy of control and mastery of the environment, has a long history in the realms of magical thinking and the subordination of an enabling culture of slaves/servants/sensors/devices who take care of basic needs and security.

In the 1950's, Marshall McLuhan's seminal text *Mechanical Bride: Folklore of Industrial Man*[19] presciently described the fusion of user and technology into a supernatural 'extended' being whose wishes are enacted by push-button gadgets. Back then, they were addressed to the housewife, and promised new realms of leisure. Now, the whole family is serviced by products compliant to practical and emotional needs. A recent advert for LG HomeChat, which connects and controls home appliances, presents this convivial scenario: *'We will be going on a trip for three days'*; *'Yes Master! ...Switch to Vacation Mode?...I am going to miss you!'*[20] The Japanese digital assistant Gatebox offers users the opportunity to interact with an anime character, a 3D-projected hologram inside a tubular glass gadget, called Azuma Hikari.[21] – who functions as a "caring presence"...

In *Home Sweet, Intelligent Home*, Sarah Kember and Joanna Zylinska[22] present technologies that

replicate conventional power relationships as disturbing. They are asking the bigger question, how can we embrace future configurations if we are using pre-conceived ideas?

The protagonist Theodore, in Spike Jonze's 2013 film *Her*, projects his desires onto an AI *Siri*-styled computer operating system, Samantha, and becomes antagonized when he realizes he is sharing 'her'. In the film *Blade Runner 2049*, replicant K has a relationship with Joi, a purchasable holographic companion – neither is human but the preoccupation of the fiction is whether Artificial Intelligence can learn and reproduce itself. The bigger question here is whether the denizens of a smart world need to reproduce the hierarchies and social divisions of the 'real' one. To counter the asymmetries and the 'magic of the effects created' by animated artifacts, anthropologist Lucy Suchman[23] suggests we need to understand the constructedness of the boundaries between humans and machines and their social and material consequences. In the realm of the physical environment, it is often interrogating

the seams, joins and the meeting of edges that provide a way in.

Seamful practice

The need for a more seamful practice was already incorporated into Weisner and Seely Brown's predictions for ubiquitous computing. Reprised by Mathew Chalmers in his argument for a seamful design approach, he comments on how they observed that, with interfaces where multiple tools were too-seamlessly integrated, the lack of difference often hampered user-interaction. 'Seamful design involves deliberately revealing seams to users, and taking advantage of features usually considered as negative or problematic.'[24] In one example, a 'seamful map' reveals varying Wi-Fi signal strength on a university campus – empowering users to change their locations.

This call for the productive use of difference and its acts of accommodation and appropriation is akin to a sub-culture of DIY and *bricolage*. It is in this sense that a seamful practice encourages designers to think in terms of assemblages and

Fig 3 - Towards a seamful design strategy – the designer's job is to draw attention to the complex and disruptive elements that have been simplified in interiors and to recognize how things come together in particular scenarios, rather than melding them in to an amorphous unity. Collage by Naomi House.

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counter-assemblages, whereby both DIY and critical design thinking engage in the process of taking things apart in order to see how they might (better) fit together.

Drawing attention to the temporality of spatial practices, the activist and technologist Stewart Brand has demonstrated how buildings 'learn'[25] through 'irregular shifts of necessity'. Rejecting the way that designed spaces can seem self-evident, he urges us to attend to what happens over time – the transformations, modifications and effects of elaboration and incoherence – not least the way the minimal, sculptural Google Home Assistant might become embedded in the matrix of objects on the kitchen table. Zylinska's philosophy of ethics introduces these shifts of necessity into a technologized and economic sphere, observing, 'The narrative of seamless coevolution between different biological and cultural entities that depicts the whole world as 'connected'... threatens to overlook too many points of temporary stabilization that have strategic significance.'[26] It is in these 'points of temporary stabilization' that we see how things assemble and re-assemble in particular political realities.

Seamfulness suggests a design strategy that draws attention to the complex and disruptive elements that have been simplified in interiors – and indicates the contingent 'joins' between different kinds of activities and human-object relations. Rather than things enveloping us by magic, it is about the realities of manufacture, application and use. The designer's job is to recognize how things come together in particular scenarios, rather than melding them in to an amorphous unity.

Seamfulness proposes a more complex sensibility, in the spirit of radical designers and philosophers who have sought to conceive the future home as more contradictory and politically engaged, by acknowledging complexity and difference.

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Author Biographies

Barry Curtis has interests in architecture and design theory, literature, history and philosophy as they relate to exploring the material world. He has written on 'haunting' and has a particular interest in the production of spectacle and the presentation of self in everyday life. 'Futurologies' in an extended sense, from scientific research to speculative fictions and realizations, is a longstanding research interest.

Naomi House is a designer, educator and writer. Her specific expertise is in the field of interiors and its psycho-spatial dimension. Pushing against the domestic interior as a typology that tends to be resistant to change, Naomi's teaching and research practice focus on the agency of the interior and its role in informing everyday behaviors. She is particularly interested in the use of forensic methods as a strategy for exploring and questioning how objects, environments and their interactions can be analyzed, interpreted and animated.

Monika Parrinder is a writer, educator, researcher and consultant, with a background in design practice. Through journalism, public speaking and design research, Monika uses cross-disciplinary methods to facilitate new thinking for our collective futures. She has a particular interest in the way design and communication operate in a complex feedback culture, and innovates ways of capturing and writing about this in relation to everyday life.

Embodiment of Space

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Abstract

This chapter investigates a new topology of interior spaces in relation to temporal rhythms. The physicality of our bodies is the centre of consideration, with the human body clock as parameter for spatial development. In my project proposal *Circadian Space*, predetermined standards of interior design are de-programmed, not only in their functionality but also in the way these spaces are inhabited, offering a future perspective on dwelling.

Fig 1 - Circadian Ryhthm (2014), Helga Schmid.

This chapter investigates the nature of temporality in relation to the future of interior spaces. The physicality of our bodies is placed at the centre of consideration, with the human body clock as parameter for spatial development. This approach disconnects interior spaces from the traditional topology of space. The starting point is the temporal relationship of time and the usage of interior spaces: Currently spaces are inhabited during certain hours of the day. The structure of a typical day for adults in the developed world, as shown in the example below, illustrates our relationship between time and space:

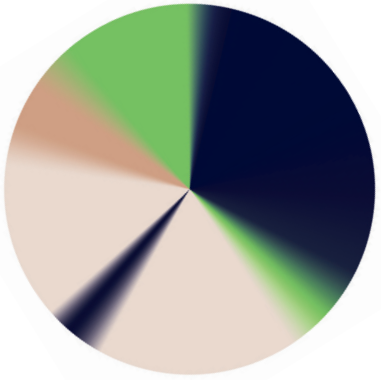
23:00 to 7:00 / bedroom / sleeping
7:00 to 7:30 / bathroom / cleansing
7:30 to 8:00 / kitchen / eating
8:00 to 9:00 / public space / commuting
9:00 to 13:00 / office / working
13:00 to 14:00 / public space / eating
14:00 to 18:00 / office / working
18:00 to 19:00 / public space / commuting
19:00 to 20:00 / kitchen / eating
20:00 to 22:45 / living room / relaxing
22:45 to 23:00 / bathroom / cleansing

As this demonstrates, the key factor for changing and inhabiting spaces during certain points in time is the clock. Clock time structures and directs people's behaviour. In this chapter, I argue for an alternative structure in relationship to interior spaces. Rather than being guided by clock time, I suggest that the space can act as the clock itself, and body rhythms become the essential criteria for spatial movement. The basis for this is chronobiological research,[1] which categorises the human biological rhythms into three rhythmic domains of *ultradian rhythm* of less than 20 hours (e.g. the heartbeat), *circadian rhythm* of around 24 to 25 hours (e.g sleep-and-wake cycle) and *infradian rhythm* of 28 or more hours (e.g. menstrual cycle).[2] For interior spatial considerations, I focus on the human circadian rhythm, as outlined by the chronobiologists Russell Foster and Leon Kreutzmann.[3]

As part of my research, I divide the circadian rhythm into seven distinct phases of rest, transition and activity:

1. Sleep phase
2. Wake-up phase
3. Cognitive performance phase
4. Nap phase
5. Physical performance phase
6. Intuitive phase
7. Sleepiness phase

The phases are mapped out onto a circle representing the duration of one day, on average between 24 to 25 hours. [Fig 1] The duration of each phase represents only one possibility, as this varies from person to person and day by day. This takes into account that bodily rhythms are flexible in comparison to the rigidity of clock time.[4]Using the schematic scheme of seven phases provides a novel perspective for spatial design based on the body. Criteria for interior design range, for instance, from peak in



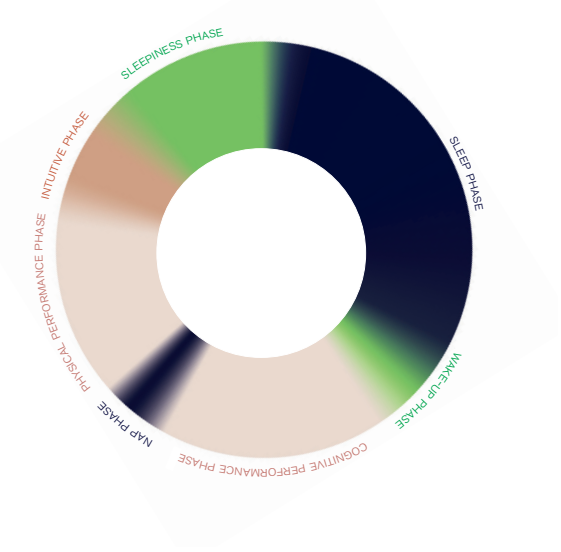
concentration, best grip strength, to increase of sleepiness. The intention is to transform internal time into external space. The typology of a home, with bedroom and living room, becomes irrelevant when the bodily rhythm provides new criteria for dwelling.

This approach shows some resemblance with the work of the architect Philippe Rahm. With a focus on climate, he outlines his methodological approach on ‘interpretive architecture’:

The goal is to come up with an architecture free of formal and functional predeterminations, a de-programmed architecture that is open to variations of season and weather conditions,

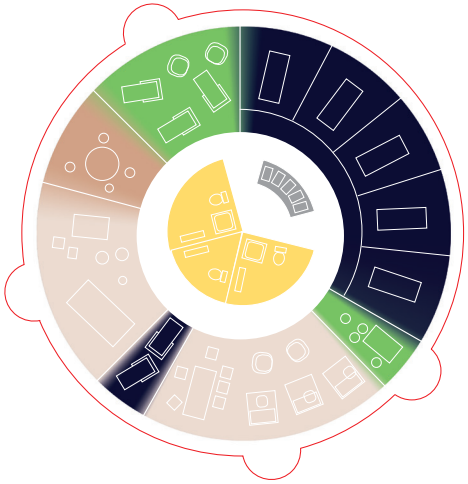
Figs 2&3 - Circadian Space Visualisation: Circadian Space I (2014), Helga Schmid.

day/night transitions, the passage of time, and the appearance of novel functions and unexpected forms. What we are working toward is a reversal of the traditional approach to design in order to achieve a new spatial organisation in which function and form can emerge spontaneously in response to climate.[5] Predetermined standards are thus de-programmed, not only in their functionality but also in the way spaces are inhabited. In relation to the circadian rhythm, interior spaces will only be used once a day during a certain biological period, and not multiple times during the day. The design is aimed at ideal conditions for each body phase. This includes parameters like light intensity and spectrum, room temperature, textures, materials, colours, atmosphere and furnishings. In my collaborative research practise, together with experts in chronobiology, sociology of time, architecture, interior and lighting design, the design of a Circadian Space was developed. A schematic, conceptual drawing of the space and a briefing are to be used as starting point for other practitioners. [Figs 2&3]



Here I exemplify four bodily phases as follows:

The wake-up phase is one of the shortest phases, with an average of between half an hour to one hour. In this stage, the body undergoes a transition from sleep to wake, from lying to standing wide awake. Biological attributes include the sharpest rise of blood pressure, cortisol and testosterone secretion, while melatonin secretion stops. Translated into an



- Sleep Phases
- Transition Phases
- Active Phases
- Intuitive Phase
- Sanitary Zone
- Private Zone
- Nutrition Zone

interior space, the space consists of four areas: a soft lying area as a transition from the bed, leading to an area for stretching and warming up of the muscles, followed by to an area for sitting upright, and finally inducing standing up in order to walk to the next phase. The lighting conditions in the room simulate a sunrise: from the dark reddish, low light intensity to an activating blue with higher intensity.

Following this, the cognitive performance phase is one of the longest phases, with a duration of approximately three to five hours. During this period, the body is at its peak with regard to concentration, short-term memory and logical reasoning. The heart rate and blood pressure are at their maximum. The interior space reflects this stage by providing different modes of working. Separated into a large open space and small enclosed niches, it allows for a variety of actions to be undertaken. The furniture in the space is mobile and can be repositioned depending on the mode of working, physical and/or intellectual activity, in groups or individually. The body position might vary over

ROOM	CIRCADIAN PHASE	DURATION	PEAK BIOLOGICAL ATTRIBUTE	LOW BIOLOGICAL ATTRIBUTE	LIGHT (LUX RATE)	BODY POSTURE
1	Sleep Phase	6-10h	Melatonin peak Gastric motility Deepest sleep	Body temperature Attention Vigilance	'NIGHT' dark: 0 lux	lying
2	Wake-up Phase	1/2-1h	Blood pressure (sharpest rise) Testosterone secretion (highest)	Melatonin secretion (stops)	'SUNRISE' dimmed: soft blue 350 lux	sitting stretching standing
3	Cognitive Performance Phase	3-4h	Cortisol level Logical reasoning Alertness Short-term memory Concentration		'DAY' bright: full spectrum 500 lux	sitting standing moving
4	Nap Phase	1-2h		Alertness	'SHADOW' dimmed: red-orange 50 lux	lying
5	Physical Performance Phase	3-4h	Alertness Grip strength Muscle strength Lung and cardiovascular performance Cardiovascular strength Core body temperature Blood pressure	Sleep prospensity	'DAY' bright: full spectrum 500 lux	moving
6	Intuitive Thinking Phase	1-2h	Intuitive thinking Creativity		'SUNSET' soft light: 350 lux	sitting standing moving
7	Sleepiness Phase	2-3h	Melatonin production	Body temperature drops Bowel movement suppressed	'DARKNESS' red-orange 50 lux	sitting lying

Table 1 - Circadian Space Diagram (2014), Helga Schmid, in reference to Rhythms of Life: The Biological Clocks that Control the Daily Lives of Every Living Thing (London: Profile Books, 2004), p. 248.

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the course of the phase, changing from active positions of walking and standing to sitting still. Concerning the light, it is at its brightest stage, in full spectrum. This is again comparable with the path of the sun through the course of the day, which is at its highest point.

After the first peak follows the short nap phase of around one to two hours. At an interval of around twelve hours from the point of deepest sleep (in the sleep phase), the body undergoes a second rest phase as part of the circadian rhythm. In this stage, alertness and concentration significantly decrease. The space accommodates this moment of 'lying in the shade'. It is not intended for deep sleep in complete darkness, but rather for taking a rest and contemplating. Therefore, the space is a soft and comfortable lying area with dimmed lights of a very low lux rate (~50 lux) consisting of red-orange light.

The second peak of the day is the physical performance phase, with an average duration of three to five hours. Bodily strength is at its peak, and this is categorised as the most active phase within the circadian rhythm. The biological attributes of this phase are peaks in alertness, grip strength, muscle strength, lung and cardiovascular performance, cardiovascular strength, the highest body temperature and blood pressure, as well as lowest sleep propensity. For the interior design of the Circadian Space, this results in a large space that allows all kinds of physical activities. The dominant bodily posture is standing and constant movement. The ideal light conditions are external day light from 5,000 lux upwards, or in reference to interior spaces, the full light spectrum with a minimum of 500 lux. The duration of the physical performance phase is in contrast to present-day living conditions. The predominate body position of an average city dweller is sitting, up to fifteen hours each day.[6] By shifting the focus on the human body, the conflict of this physiology and the reality of today's chair-based world comes to the foreground. In the Circadian Space, around one fifth of the day is allocated to physical activity.

My aim is to influence the thinking on temporal structures in relationship to body and space. The Circadian Space introduces alternative criteria for spatial design outside the contemporary norm. It is not a blueprint for the 'perfect' space, or a strict set of rules on how to design interior spaces. It is rather a wake-up call, in contrast to traditional categories and understandings of interior spaces, to a new embodiment of space, by offering a fresh perspective on dwelling based on the physiology of the human body. With the human circadian rhythm at the centre of consideration, the approach is in line with a way of thinking and living as described in Alan Lightman's novel Einstein's Dreams:

> [These people] do not keep clocks in their houses. Instead, they listen to their heartbeats. They feel the rhythms of their moods and desires. Such people eat when they are hungry, go to their jobs (...) whenever they wake from sleep, make love all hours of the day. Such people laugh at the thought of mechanical time. They know that time moves in fits and starts. [7]

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1. The study of biological rhythms is called chronobiology. The word is based on the ancient Greek term 'chronos' meaning time, 'bios' meaning life, and 'logos' meaning study'. See Jay C. Dunlap, Jennifer J. Loros, and Patricia J. DeCoursey, 2003, 'Chronobiology: Biological Timekeeping', Sunderland, MA: Sinauer Associates Inc., U.S., p. 4.

2. Willard L. Koukkari and Robert B. Sothern 2005, 'Introducing biological rhythms: A Primer on the temporal organization of life, with implications for health, society, reproduction, and the natural environment', NewYork: Springer-Verlag, p. 7.

3. For details, see table Rhythms of Humans (2004), by Russell G. Foster and Leon Kreitzman, in Rhythms of Life: The Biological Clocks that Control the Daily Lives of Every Living Thing (London: Profile Books, 2004), p. 248.

4. Conversation with the sociologist Karlheinz Geißler. He uses the German word Takt in contrast to rhythm: 'The stroke or clock is the opposite of rhythm, it is a different quality. The clock is repetition without exceptions. The clock is rigid, while rhythm is flexible.' 18 March 2013, Munich, Germany.

5. Gilles Clement, Philippe Rahm, and Giovanna Borasi, 2007, 'Environ(ne)ment: Manieresd'Agir pour Demain / Approaches for Tomorrow', Milan: Skira, p. 155.

6. Levine, James A., 2014, 'Lethal Sitting: Homo Sedentarius Seeks Answers', Physiology, V, 29, pp. 300–301.

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Author biography

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Ornamental Futures

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Abstract

With the developing ability to parametrically design and digitally fabricate interior goods, ornamentation has the possibility to be re-conceptualized as a site- and occupant-specific intervention that is readily available and infinitely customizable. Historically, proportion and allegory drove the design of moulding, but now most contemporary mouldings are mass-produced, extruded profiles that lack any connection to their inhabitants. This chapter, through a case study investigation, proposes the introduction of advanced computational methods in the mass fabrication of custom, non-extrudable, abstracted and lofted, multiple profile mouldings.

The interior and exterior details of buildings have historically been influenced by the human form. As early as 30 BC, Vitruvius understood the human body as a system of mathematical proportions: the head measured from the forehead to the chin is exactly one tenth of the total height, and the outstretched arms measure as wide as the body is tall. In *De Arcitectura,* Vitruvius maps the specific proportions of the head and the human profile, which arguably influenced his architectural proportions.[1] Derived from Vitruvius' writings, Leonardo da Vinci also understood the proportions of the human body as a system where each part is a simple fraction of the whole. Both posited that this system should be applied to the design of buildings.

Francesco di Giorgio, in his unpublished 1495 treatise *Tratto di Architecturra Ingegneria e Arte*, analyzes cornice profiles and their relationship to the human facial profile. In an image from the treatise, a cornice profile is overlaid on man's profile:

> "The *gola* [throat] corresponds to the crown of the head; the *scotio regolo* [a misnomer; scotia is a cavity, this is a fillet] is an interval; the corona or *gocciolatoio* [dripstone] fits the forehead; the *echino* or *ovolo* is placed over the nose; the *scotio* sits on the bridge between the nose and mouth; the *denticulo* stands for the teeth-bearing mouth; the cimatio [cymatium, or cyma riversa] is for the chin; and the *zophoro* [frieze] for the throat."[2]

Diego de Sagredo, in his 1526 manuscript, notes that the name of each moulding alludes to its figurative meaning and proposes that the cornice is compositionally similar to the human face. Jacques François Blondel, in volume one of the *Cours d'architecture* (1771), determines that human profiles can be found in existing architecture. Blondel argues that the facial resemblance enables the spectator to quickly apprehend what is pleasing or otherwise about the cornice.[3]

Le Corbusier also referenced human proportion in *Le Modulor*. In the long tradition of Vitruvius, Leonardo da Vinci's Vitruvian Man, and the work of Leon Battista Alberti, his investigations into mathematical proportions in the human body were conducted to improve both the appearance and function of architecture.[4]

Allegory

In addition to being derived from the human form, mouldings and related interior ornaments often contain allegorical content. The Cabinet de la Meridienne at Versailles, one of Marie Antoinette's private chambers, was heavily embellished with allegorical mouldings and ornaments. The ornaments were added in 1781, after she gave birth to an heir, the Dauphin. The allegorical references celebrate the prince with imagery of dolphins (the Dauphin is the title given to the eldest son in France, but also means dolphin), the king is symbolized by the eagle of Jupiter, and the queen by the peacock of Juno. The couple's bond is referenced with garlands of roses and bows and arrows.[5] Allegorical references are also evidenced in the 1882 Worsham-Rockefeller Dressing Room, commissioned from George Schastey & Company by art collector and philanthropist Arabella "Belle" Worsham. As noted by Higgonet, though it is not a typical painted portrait, the room is effectively a portrait of Belle in that it is saturated in motifs that represent her. Belle brings herself into the room with multiple instances of images of bells within the motifs. Further investigation into the ornamentation of the space reveals numerous seashell and pearl motifs that signify femininity, while depictions of hand mirrors, scissors, hair combs, brooches, necklaces, and earrings depict the room's purpose. Together this imagery represents Belle's cultivation of herself as well as her aspirations for a more privileged lifestyle.[6]

The Embedded Portrait

The Embedded Portrait series rethinks decorative ornament as digitally designed and fabricated, customizable reflections of the inhabitants of an interior environment. It is defined as dynamic moulding derived from the

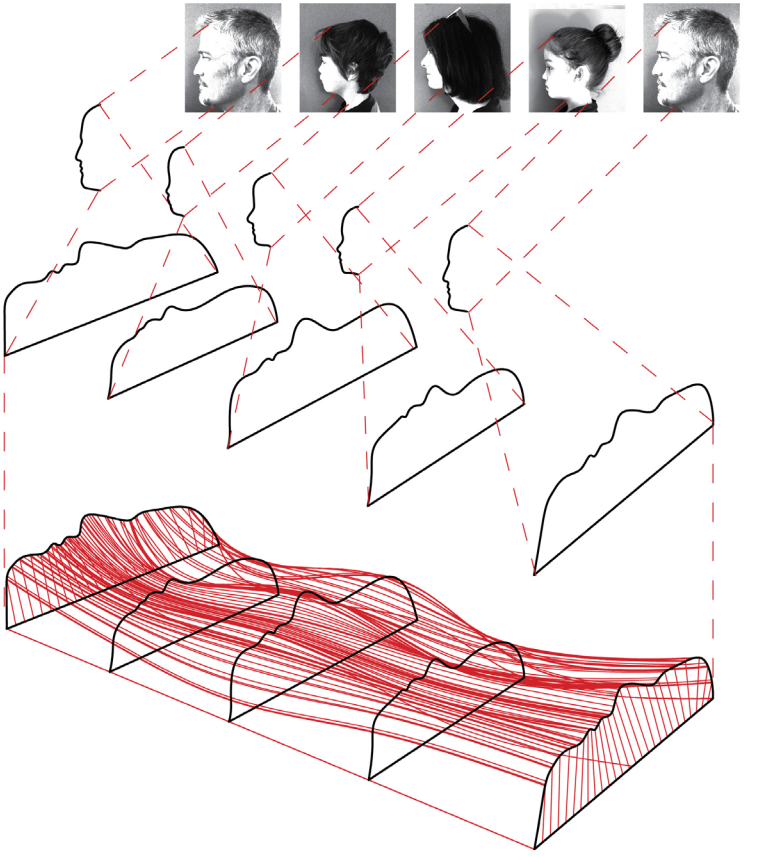

Fig 1 - Embedded Portrait Moulding, Process and Product. © deSc: Architecture, design, research.

profiles of the inhabitants, present and/or past, which form a larger portrait. The materiality of the elements, 3D printed from layered and glued recycled paper, is visually similar to the ready-made wood or plaster moulding available from catalogues and local hardware stores, as well as the custom and prefabricated wood or plaster friezes that once offered an allegorical element to the ornamentation of the home.

The Embedded Portrait series mouldings can be a snapshot in time of multiple inhabitants, or they can be constructed over time from one or more people. The moulding design process entails simplifying the desired portrait profiles as curves in Rhino 3D software, which are then potentially lofted (transformed into curved lines) through a parametric script to form modular moulding elements. The modules can be matched in multiple permutations to form a non-repetitive installation. The moulding modules are digitally printed on a 3D printer which constructs by layering, through cutting and gluing sheets of standard white copier paper.

Future

The Embedded Portrait mouldings serve as a case study for the evolving generation of digitally induced, industrially produced, mass customizable products that can be one-of-a-kind, aligned with preference and taste, and fabricated to precisely fit the architectonic of the interior.[7] The mouldings are a contemporary augmentation of the extensive historical implementation of allegory and human proportion in interior ornament. While the mouldings nod to historical single profile form, the lofting of multiple profiles generates an abstracted element not achievable without computational methods. The originating profiles can only be understood at almost imperceptible moments as the generated form is established as an organic abstraction of its extruded predecessor. Design of the framework for fabrication through parametric software makes mass-customization for infinite sets of profiles possible. Such computational design and digital fabrication methods introduce a future ability to mass-produce (rather than just prototype) ornamental forms not possible

to manufacture with traditional techniques, and made-to-measure to a space and its inhabitants.

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3. Ibid., 3.

4. Michael J. Ostwald, "Review of Modulor and Modulor 2 by Le Corbusier (Charles Edouard Jeanneret)," Nexus Network Journal, vol. 3, no. 1 (2001): pp. 145–48.

5. "Découvrez la restauration du Cabinet de la Méridienne de Marie-Antoinette." Societe des Amis de Versailles, 2015, Chateau de Versailles.

6. Anne Higonnet, "A Secret Room Goes Public: Gilded Age Sex and Success at the Met" (paper presented at Interior Provocations: Radical Domesticities Symposium, Pratt Institute, Brooklyn New York February 4, 2017).

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Author Biography

Deborah Schneiderman is a Professor of Interior Design at Pratt Institute, as well as principal/founder of deSc: architecture/design/research. Her scholarship and teaching explore the emerging fabricated interior environment. A widely published scholar, her research includes the books *Inside Prefab: The Ready-Made Interior; The Prefab Bathroom; Textile, Technology and Design: From Interior Space to Outer Space* (with Alexa Griffith Winton); and *Interiors Beyond Architecture* (with Amy Campos).

The Relational Surface

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Abstract

In this chapter we look into the future of the domestic interior space as a hybrid field of vibrations between physical and digital surfaces. We propose that design should focus on the active relations between and within human-centred systems, where human presence in a space is best described not as an observer or user, but as a locus of experience. In the future of interiors as the creation of relations, new encounters will arise between the material and the digital.

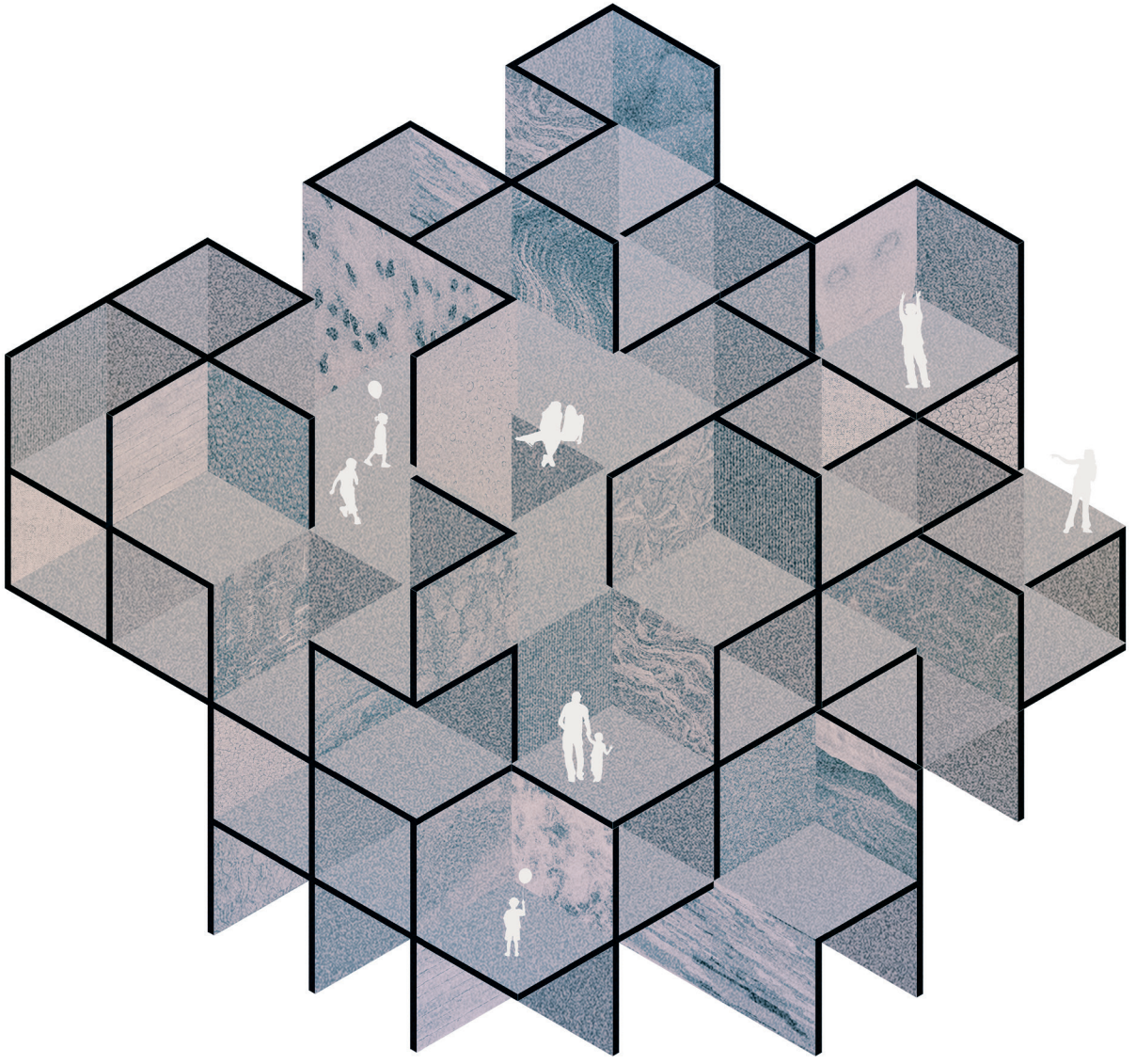

Fig 1 - I no longer know there is a wall'—Georges Pereç, Species of Spaces and Other Pieces, illustration by Mále Uribe, London, 2018.

The spatial environments we inhabit in the developed world are framed within categories of exterior and interior, virtual and physical, illusory and real, organic and artificial. But from a less human-centric perspective, our spatial environment is a much more complex system of multiple dynamic layers of information that simultaneously cross over with these categories in a continuous flux. This unfolds not through the fixed and rational Cartesian space, but through what Karen Barad calls 'intra-active relations'[1]—space is a continuous process created by multiple relationships between material surfaces, humans, microbes, things, cultural codes, digital interfaces, and atmospheric phenomena. These dynamic relations actively generate space as a 'field of vibrations'[2] or a 'system of articulations' within 'infrastructural webs and local values' (Moreno, 2010). To consider the future of post-digital layers progressively overlapping with architectural surfaces, we must question and transcend the view of the interior as container, and instead look for alternative, unexpected relations. Within such an intra-active system, what we come to regard as human is increasingly linked with digital technologies and the aesthetics of the non-human, particularly with the domestic use of computer interfaces, screens and lighting systems that turn our material interior surfaces into dynamic fabrics. These encounters of the digital, material and human in our everyday lives will shape our spaces into places, under new articulations of physical form, sensory experience, meanings and habits. If the domestic interiors we inhabit have a fundamental role in the construction of our own personal identity, feelings and memories (Bachelard, 1969), then analysing our current media encounters, or 'kissings' (Lavin, 2011), is key to speculation about the experimental narratives and potentials of the mixed architectural surface we describe.

Just as art has shifted from simple interaction to the creation of open-ended relations (Bourriard, 2002), design is turning into a relational field as exemplified by customisation and do-it-yourself cultures that have encouraged 'users' to become co-creators (Blauvelt, 2008).

As in music, fashion, and other commercial industries, interior spatial design is focused on immersive atmospheres and memorable experiences for occupants as users and consumers. Here we analyse interior spaces as a hybrid field of vibrations between physical and digital surfaces, and propose that design should focus on the active relations between and within human-centred systems, where human presence in a space is best described not as an observer or user, but as a locus of experience, and experiences.

Projecting data-interiors

In such an information-driven era, we live in a continuous data flow through different devices and interfaces at different scales and in various spaces. New digital technologies have 'warped space' (Vidler, 2000) into new forms of production and perception. 'Augmented space' refers to physical space filled with dynamic, visible and invisible layers of multimedia information (Manovich, 2006). Zooming in, our contemporary domestic interior spaces are increasingly filled with software and devices that transform our intimate spatialities into simultaneously local and global spaces, with access to and from anywhere. By conceptualising our interiors as living systems that unfold through relational dynamics, we see blurred delineations between software and space, between function and sensorial experience, resulting from time-based flexible and adaptable performance.

With the new 'zoomscapes' (Zchwarzer, 2004), or modes of architectural perception brought by new technologies and the inclusion of software and screens in private spaces, a huge amount of 'poor images' (Steyerl, 2016) have conquered culture, flattening spatial and sensorial engagement into visual commodities, and reducing architecture value in media to its ocular obsessions. If the future of interiors is in the creation of relations, instead of purely material data surfaces filled with data, new encounters will arise between the material and the digital. Projecting the experience of interior space in terms of relations orients our focus onto the expansion of phenomenological experience

through the use of hybrid interactions with media in more meaningful ways—beyond surface decoration or the functionality of 'smart' architecture. This means new forms of sensorial, intellectual and emotional engagement with the relational surfaces that shelter and surround us. Our impetus as artists, designers and experiencers is to imagine the hybridisation of our interiors by embracing the agency of materials and media as an intra-active system.

As Don Ihde (2009) explains in his 'postphenomenology', technology is the environment—a new kind of context that transcends the personal, social and physical. Engaging with screens, listening to music from loudspeakers, even being in a room with surfaces illuminated by artificial light, we bodily-experience the world through electronic devices and non-human interactions. There is an inseparable bond between the human body, space and technological interactions; hence, the hybrid relations of space also have emotional implications and the power to change the way we sense and feel things, spaces, and people. We should thus understand augmentation not only as a technology-in-use but as a cultural and aesthetic practice that constitutes context. New material engineering, and the use of moving image, sound and light will play a key role in the production of interiors, making architectural surfaces not only sentient but also capable of triggering dynamically changing aesthetic experiences at an intimate level.

Surface encounters

The use of augmentation in interior design has brought 'a key quality of computer driven representations and systems: variability' (Manovich, 2006). This variability can make material and static surfaces dynamic, adaptable and flexible. But at the same time, 'augmentation' implies something added to an existing physical surface, as an additional layer that only perpetuates this division and limits the transformative capacities of the encounter. An exception to this is projection mapping, which uses the three-dimensionality of pre-existent architectural surfaces to articulate new spatial

meanings in a collaborative, performative, more intra-active way. It has so far primarily been used in public, commercial or artistic contexts, but some technological and artistic experiments point in the domestic direction.

In future domestic interiors therefore, expansive hybrid encounters of the surface cannot be reduced to temporary visual interventions onto the white wall as an inanimate canvas, nor can they be reduced to art within a framed screen in which software art can be purchased from a digital catalogue. While the latter approach brings variability, in the end it is only the translation of the TV screen to the wall.

Moving images on a wall are dead once the power and light is gone, leaving behind a white frame or black rectangle; the imagery make us temporarily forget the presence of the material surface in the first place. While our focus in this chapter is on digital interventions, taking a relational view means looking beyond technology and the artificial to see connections within and between ourselves and other natural organisms and phenomena at all scales—microbes, light, sound, plants, insects, materials, things and behaviours that mask and reveal, forms and formations—all the tangible and intangible things present in the domestic environment

New technologies in digital displays and materials enable new 'kissings' as Lanvin has articulated, with the architectural surface, with new forms of virtual materiality and unexpected possibilities, blurring categorisations to create new definitions of the surface 'that operate through suction and slippage rather than delimitation and boundary' (Lavin, 2011). Relational capacities of sentient, hybrid interiors include the sensorial and emotional effects they can trigger beyond the visual embellishment of the surface of the wall as a mere digital cladding. With advances in textiles and interactive wearables that can connect us to the environment and each other, the architectural surfaces that surround us can become not only dynamic but adaptable, sentient and expressive, while enhancing their material and multi-sensorial nature. Technological instruments have enabled us

Fig 2 (Following page - left) - 'Panopticon' exhibition at UCL, London, by Kevin Walker, David di Duca, Suzy Hogg, Ollie Palmer, 2013.

Fig 3 (Following page - right) - 'River Is...' installation by Art+Com, Gwangju, So. Korea, 2012.

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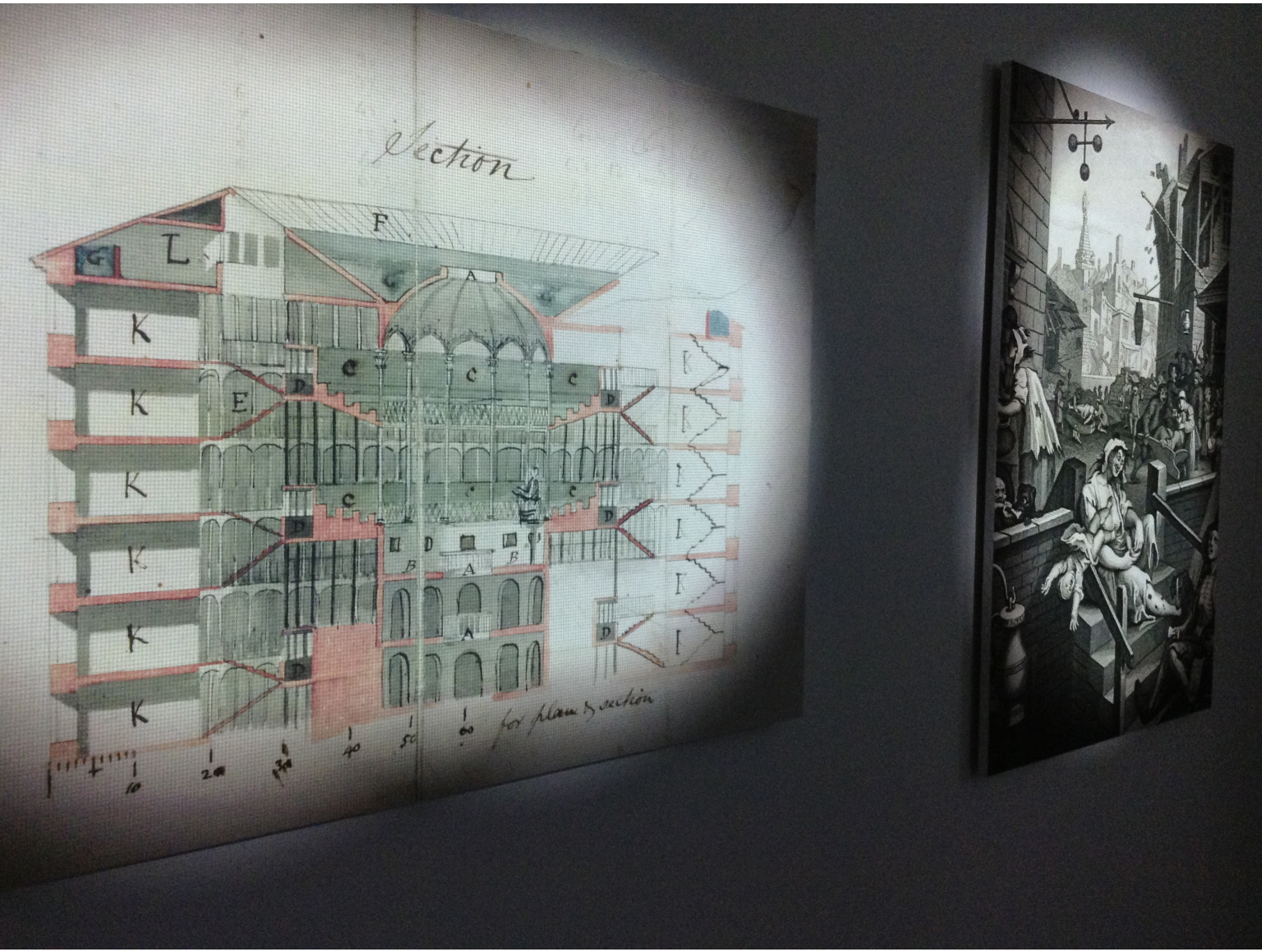
to perceive phenomenon that are beyond our natural sensitivities—from X-rays to satellite images to sounds from space, we are able to translate data into our everyday life in order to expand our perception of the environment. This constitutes what Ihde (1993) calls hermeneutic relations. Future interiors thus can go beyond customisation of light and temperature and serving media, to being truly relational systems where surfaces can bring meaning on multiple levels across physical and virtual worlds through complex but precise interventions.

A few examples by ourselves and our colleagues illustrate some of the relational and material properties that constitute post-digital design. While all of these were done in public contexts, again they point to potential applications in the domestic interior. *Panopticon* by Walker (2013) utilised projection mapping for bespoke lighting and information delivery, to direct occupants' attention to objects of interest on the walls, augmenting them with relevant text and images, and linking them with surrounding objects, to curate immersive narrative content in an otherwise static environment. [Fig 2]

River Is... by ART+COM (2012) is a surface that encodes messages through the interaction of material and light. Based on how light refracts on water, the designers created a complex, faceted chrome-plated surface that reveals specific reflected messages when light is projected from a specific angle. The highly detailed engineered material process, together with the intangible reflections, generates a constantly moving surface, articulating the interior space itself in relational meaning making. This also implies an aesthetic experience related to contemplation through simple spatial alterations, while also re-visioning the interior surface as informational. [Fig 3]

In *Texture of Light* by Uribe (2017), an interior surface is constructed as a hybrid and sentient device that intra-actively constitutes the environment. A two-meter-wide surface with thousands of geometric pieces create a large-scale micro-texture that reacts to light, sound, and the vibrations of the inhabitants in space in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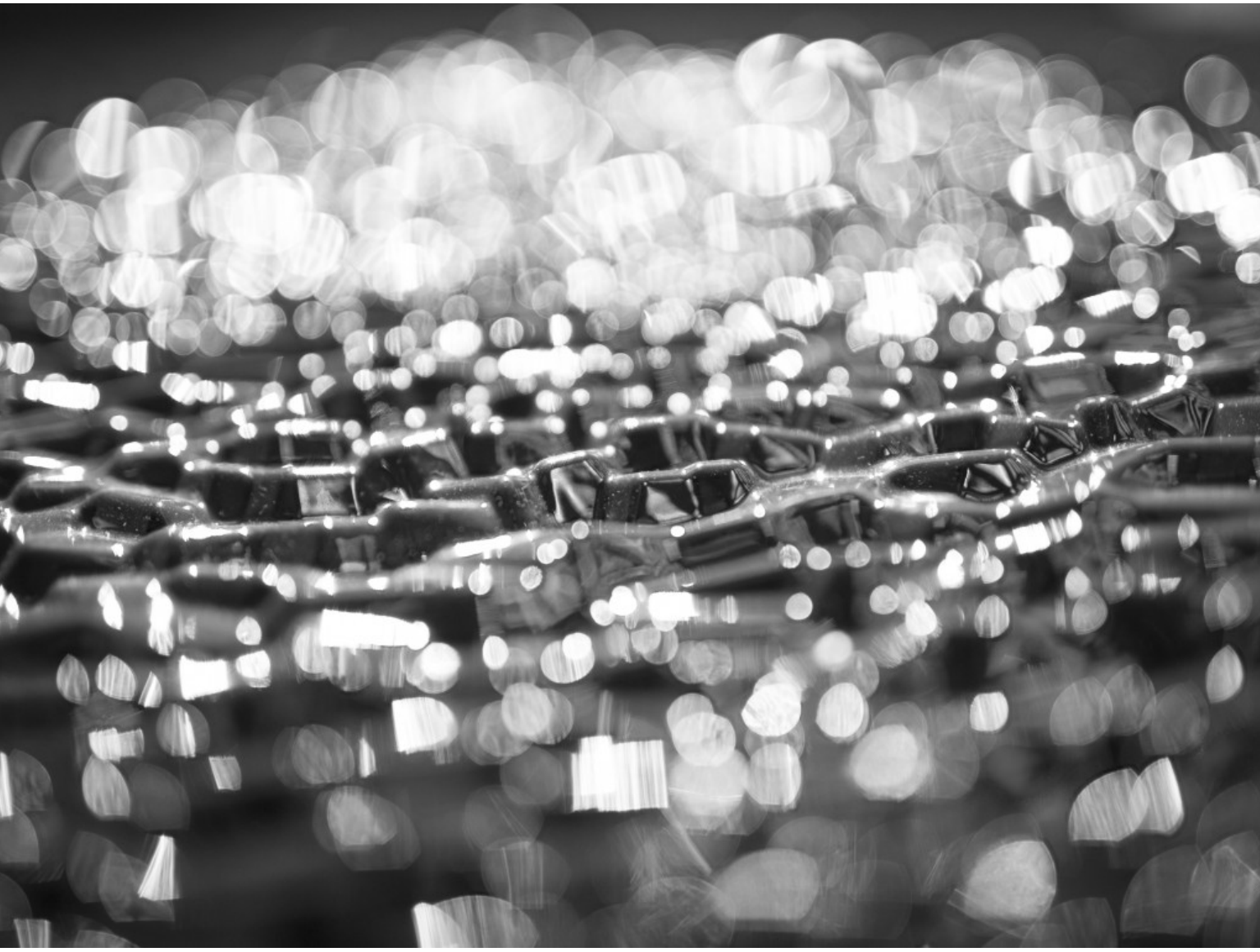

a multi-directional dynamic. While the surface itself is physically motionless, it creates an illusion of continuous dynamism through the relational interface of projected light, shadows and sound. [Fig 4]

Projecting these examples into larger spatial and temporal scales, we can imagine entire surfaces with the ability to dynamically relate to us and the surrounding interior and exterior environment, bringing new uses and ambiences to everyday interiors, telling us about the weather, news, ourselves and others. This also opens up many questions: To what extent do we want our surfaces to be flexible? How might this constant variability in the environment change our behaviour and that of the non-human occupants of our interior spaces? And what happens to media surfaces without power and data?

Understanding matter as a vibrant agent with the ability to affect us (Bennett, 2010), we propose that new, relational mediations of the

Fig 4 - 'Texture of Light' installation at the Royal College of Art, London, by Mále Uribe in collaboration with Thibaut Everard and Barney Kass, 2018.

surface can bring new forms of materiality, to trigger new emotional and sensorial responses in a post-digital architecture. If walls can be turned into sentient, material actors, interior space will truly become what we have called an 'information architecture' (Walker, 2001), in and with which we can literally program human behaviour. This brings with it commensurate ethical responsibility on the part of designers, developers and data purveyors.

Making surfaces vibrant and relational gives interiors under systemic dynamics, where adaptability and resilience replace fixation and delimitation; where personalisation and spatial expression of individual identity replace the standardisation and the flattening of current spatial categorisations. Physical and virtual materialities are not only tools at our service, but means to help us experience space in more personal, intimate, and critical ways. This also goes in the direction of building conscious relationships with our environment, using technology and its variability as a means for reflection and social interaction. 'To begin experiencing the relationship between persons and other materialities more horizontally, is to take a step toward a more ecological sensibility.' (Bennett, 2010) Projecting our future interiors as more open-ended, self-organising systems will thereby transform us as experiencers.

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1. Intra-action is a concept proposed by Karen Barad in her agential theory, using concepts from Niels Bohr's quantum theories, with the term referring to a new ontology where reality is not created by pre-fixed 'things-in-themselves' but by 'things-in-phenomena'. Intra-action implies an instantiation of reality in which all human and non-human are active agencies in the creation of phenomena in an indestructible relation. See Barad, K. (2007) Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning. (Duke University Press).

2. Term used by Olafur Eliasson (2006) where he proposes that forms, objects and the relations

between them are temporal and constantly changing through time as fields of vibrations, where 'everything is in motion' and 'everything is coloured by intentionality'. See Eliasson, O. (2006) 'Vibrations' in 'Your Engagement has Consequences' (Lars Muller Publishers).

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Author Biographies

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The Post-Retail Age: From Obsolescence to Spaces of Otherness

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Abstract

Since the rise of contemporary retail culture in the mid-nineteenth century, intersectional forces have continually transformed how consumer products are made, how goods are conveyed, how buildings are occupied, and how interiors are designed. In the early twenty-first century, retail began shifting away from physical stores to virtual ones supported by direct delivery. The future of retail will be defined by widespread obsolescence rivalling the post-industrial turn of the previous century. What new imperatives will designers confront as retail continues its shift from physical to virtual? How will organic and informal actions contribute to the remobilization of retail obsolescence?

This chapter surveys post-retail decline to cast a lens on formal and informal occupancies shaping the future of conventional retail typologies. It demonstrates how purpose-built, enclosed shopping malls are acquiring organic forms through incremental, parasitic, and sometimes illegal appropriations—semi-public realms of internally-focused networks, social experiences, and spatial configurations built upon the ruins of obsolete indoor retail.

Since the emergence of contemporary retail culture in the mid-nineteenth century, intersectional forces have impacted how consumer products are made, how goods are conveyed, how buildings are occupied, and how interiors are designed. Shifting from one building typology to another, consumption has always been characterized by the inhabitation of physical space. In his *Arcades Project*, Walter Benjamin documented the faded glory of nineteenth century Parisian arcades, and described the aura of a retail typology that had lost its primacy to the department store.[1] By the mid-twentieth century, Victor Gruen designed the world's first suburban, enclosed shopping mall at Southdale Center in suburban Minneapolis (1956) where he employed European socialist ideals to critique American suburbia.[2] Crafting interior gathering places where people could do more than consume, entertainment and social experiences blurred *civitas* with capitalism. As an alternative to conventional urban streets, Gruen incorporated characteristics of the continental European arcade to create a new spatial type that incrementally emptied downtowns and hastened suburban sprawl.

In the early twenty-first century, retail is rapidly shifting away from physical stores to virtual methods supported by home delivery. The demise of building-based retail can largely be traced to changing social habits and the exponential growth of global direct-retailer Amazon. With an average footprint of 100,000 square meters and employing upwards of 1,000 employees as of 2018, Amazon fulfillment centers have supplanted regional shopping malls of a similar scale. In the process of exchanging physical retail activities for virtual ones, commercial corridors and enclosed malls are dying. This post-retail turn presages a worldwide future shift that will have an unprecedented effect on existing buildings and how future retail interiors will be designed.

The industrial decline of Western Europe and North America in the late twentieth century gave rise to a broad range of empty buildings that forever lost their purpose-built functions.

The conservation and adaptive reuse of heritage buildings stewarded post-industrial buildings toward diverse new occupancies. Similarly, the post-retail age will be defined by widespread obsolescence rivaling the post-industrial turn of the previous century. What new imperatives will designers confront as retail continues its shift from physical-to-virtual means? How do organic and informal actions contribute to the remobilization of retail obsolescence? Adapted interiors represent a range of semi-public networks, social experiences, and spatial configurations built upon the ruins of conventional retail. This chapter surveys post-retail obsolescence in the United States to cast a lens on the causes of this shift. It assesses emerging occupancies to envision a global future of retail design.

From Department Stores to KIVA Robots

The shopping mall typology was born at Southdale Center in Edina, Minnesota (1956) and peaked with the development of the Mall of America (1992) in nearby Bloomington. The latter represents the apogee of twentieth-century shopping mall culture in North America prior to the rise of alternative forms of retail.[3] Since the late 1980s, however, global retail has been impacted by overbuilding, demographic change, online shopping, and advancing technology. In the United States, the rise of lifestyle centers, off-price stores, big box retailers, and outlet malls initiated ongoing challenges to the conventional shopping mall.[4] By the 1990s, big box retailers simultaneously cut into the territory of discount retailers and traditional department stores, while at the same time, open-air lifestyle centers and outlet malls emerged as the direct descendants of traditional malls. Their popularity accelerated the consolidation of traditional department store chains whereby formerly independent local chains were absorbed into larger nationwide conglomerates.

Today, a trans-continental wave of store closures has further diminished conventional retailing. The presence of fewer independent department store retailers has resulted in fewer possible anchors; existing malls are

kiwy

Fig 1 - Amazon Fulfillment Center.

unable to fill empty department stores with comparable alternatives. Although luxury malls remain generally prosperous, ailing enclosed malls demonstrate higher vacancies or house previously banned discount retailers, fitness centers, or storage warehouses.[5] Many dying malls are being repurposed, while others are being demolished.[6]

Much of the demise in building-based retail can be attributed to the exponential growth of social media and web-based retail.[Fig 1] From the standpoint of spatial efficiency, the internet retail business model achieves extreme performance, yet offers limited potential for "place-making" in the conventional sense. Although Victor Gruen lamented his controversial mark on the American built environment, the current post-retail paradigm—akin to George Orwell's dark vision in *1984*—is erasing the communal pleasures of Gruen's shopping mall. In short, social media and online retailing have replaced shopping malls as the new public square.

The act of shopping in physical spaces has been replaced by remote connectivity to robots operating autonomously in distant hinterlands. Fulfillment centers house Kiva robots that sort, collect, palletize, and self-drive goods around the warehouse.[7] Once an online customer selects products, robots begin collecting and placing ordered items into bins. Bins travel along conveyor belts to the shipping area to be packed and loaded onto tractor-trailers by workers.[8] Only a handful of humans are required to engage in the entire process of ordering, preparation, and delivery. Embodying a dramatic turn from social and physical environments to hermetic and virtual ones, fulfillment centers are contributing to widespread storefront vacancies on city streets and shopping malls worldwide. Furthermore, fulfillment centers have received critical scrutiny for their adverse conditions. Workers complain of exposure to extreme indoor temperatures and walking up to twenty-five kilometers each day to complete their tasks.[9] Apart from web-based services, online retailers are now building networks of physical grocery stores, book stores, and showrooms

Fig 2 - Bonobos, guideshop.

to serve customers who are reluctant to buy online or prefer to visit a physical store.[10] Various companies are using physical showrooms to sell furniture, electronics, major appliances, and food.[11] These stores allow customers to view products before purchasing them on-site or online for direct delivery to their homes. Such stores are beginning to replace human workers with sensors and artificial intelligence that automatically interface with shoppers and charge them for purchases. An entire class of low-wage retail jobs is being increasingly absorbed by various forms of automation. The long-term impact of high-technology retail environments will radically alter the global labor landscape and the practice of commercial interior design by shifting away from conventional retail environments and toward web portals supported by fulfillment centers.

Although Amazon, Walmart, and Alibaba pose significant threats to the long-term viability of mom-and-pop merchants, department stores, and shopping malls, they also create territory for new uses to emerge within obsolete shopping malls and diminished Main Streets. The rise of online retailing, alongside the decline of brick-and-mortar stores, points toward the inevitability of a large cache of underutilized retail buildings. Vast new territories of retail obsolescence will become available for independent merchants and alternative uses. How will designers respond to emerging imperatives in the adaptation of these obsolete structures? How can designers learn from and partner with emerging stakeholders that will increasingly replace the interests of corporate enterprises?

From Obsolescence to Spaces of Otherness

The shrinking footprint of conventional retail has created territory for innovative retail concepts and organic appropriations to emerge. New 'formal' approaches to retail are rethinking the relationship between cyberspace and physical retail spaces. Founded in 2007, Bonobos—a New York-based e-commerce company that designs and sells men's clothing—operates as an entirely online retailer targeting millennial males focused on convenience and custom

Fig 3 - The Halal Guys, interior.

tailoring. By 2012, Bonobos opened its first 'Guideshop' showroom in Boston that enabled customers to try on clothing prior to online purchase and direct shipment.[12] [Fig 2] The brick-and-mortar Guideshop has subsequently become a central part of its business model, with additional showrooms in cities including New York, Chicago, Los Angeles, San Francisco, and Washington, DC. Here, overhead has been reduced to bare minimums whereby physical shops are situated only in top markets, with stores serving merely as glorified fitting rooms.

The retail typology embodied by the Bonobos Guideship is becoming increasingly commonplace. For designers, warehousing has been privileged, while the footprint of potential 'designable' retail territory has shrunken exponentially. This shift—from 'public', customer-oriented showrooms and ancillary spaces to 'private' environments that only fulfill direct-shipment orders—foretells a transformative reconfiguration of retail worldwide looming. Designers will increasingly conceive of more complex web-based interfaces and expansive back-of-house configurations—such as warehouses and regional staging depots—rather than customer-oriented interfaces defined by stores and their associated fitting rooms, display windows, wrap stations, and amenity spaces. Shifting away from public (showrooms) toward private (fulfillment) needs, the nature of designed spaces is becoming less ceremonial and more pragmatic. The bulk of interior retail spaces will reflect not only a critical shift in function, but also in aesthetics, materiality, and cost. In short, the finely-crafted urban boutique will be replaced by the rough-hewn warehouse on the edge of the city.

Apart from consumer goods, a notable area of opportunity has emerged in the food service industry. Food trucks and food carts have fostered a new wave of modest brick-and-mortar innovations, as evidenced by The Halal Guys. Founded in 1990 by Egyptian immigrants Mohamed Abouelenein, Ahmed Elsaka, and Abdelbaset Elsayed, the New York-based Middle Eastern fast-service restaurant chain traces its origins to a hotdog cart in Midtown

Manhattan.[13] As business grew, the owners noticed significant demand from Muslim cab drivers, and expanded the menu to include halal chicken, gyro, rice, and pita. In 2013, The Halal Guys opened their first restaurant, which initiated franchise opportunities and coast-to-coast expansion across North America. The interior design of The Halal Guys restaurants incorporates the aesthetics and materiality of the original red and yellow hotdog carts, as well as images of New York City street scenes. [Fig 3] This type of retail concept is becoming commonplace, as immigrant entrepreneurs develop opportunities in America that engage latent multicultural diversity. These retail forms—independent merchants operating in a realm of handcrafted and culturally-oriented production—will become more important as alternatives to conventional retail and fillers for empty physical spaces.

Migration and Contingency

Retail obsolescence and so-called dead malls will continue evolving into informal places of otherness, serving significantly different needs. As internet retail expands and suburbs confront greater socio-economic diversity, adaptation of dying malls offers both practicality and affordability. This contingency enhances the imperative for designers to view the built environment through stewardship—fostering connectivity among the environmental, economic, and social dimensions of design practice at the scale of interiors. Like a form of urban acupuncture, small and incisive actions can facilitate broader resilient strategies within established buildings and urban forms. Such interventions offer ways to address retail obsolescence through a dynamic overlap of interdisciplinary practices that simultaneously mend and grow—renewing dead interiors through innovative concepts and hybrid practices that interact with organic appropriations. Suburbs are increasingly more diverse, cosmopolitan, and socio-economically blended. They contain core attributes of resilience—resource diversity, resource availability, and institutional memory—and thus, offer the potential for greater socio-economic layering and urbanity. Serving socio-economically diverse populations,

re-appropriated shopping malls in the United States have become multicultural incubators. In the future, this diversity will continue to reinvigorate and revitalize urban cores and dying peripheries. From the theoretical perspective of Michel Foucault, "spaces of emplacement" establish *heterotopias*—or places of otherness—within obsolete malls. Processes of disinvestment and fragmentation created voids in activity, as well as physical space for alternative uses to germinate and thrive. Incrementally de-programmed retail structures have evolved into transgressive places that have been appropriated by new users. Through this process, professionally designed spaces have been organically regenerated and made anew. In the United States, examples include the Alpine Village and Swap-Meet Flea Market in Los Angeles—a European-themed retail village that has acquired a large flea market of Latin American merchants; the Lauderhill Mall in Fort Lauderdale, Florida—an enclosed shopping mall serving a predominantly West Indian clientele served by immigrant merchants; and the West Side Bazaar, a micro-business incubator designed to support socio-economic independence for refugees in Buffalo, New York. [Fig 4] These altered interior spaces offer a window into the future of a post-retail age. Ethnic shops, storefront churches, and social clubs are filling voids in shopping malls and big-box stores that were formerly bastions of racial and ethnic uniformity.

When approached through the notion of adaptation, interior design practices fostering flexibility and more modest needs can enable appropriation. In appropriated malls, uses such as schools and churches were not anticipated by mall developers, architects, and interior designers. As a stand-in for an actual urban space, appropriated mall interiors represent an alternative to the conventional street and its individual buildings. Obsolescence allowed accessibility, while the inherent spatial density of the enclosed shopping mall typology encourages a critical mass of complementary uses to take root, propagate, and prosper.

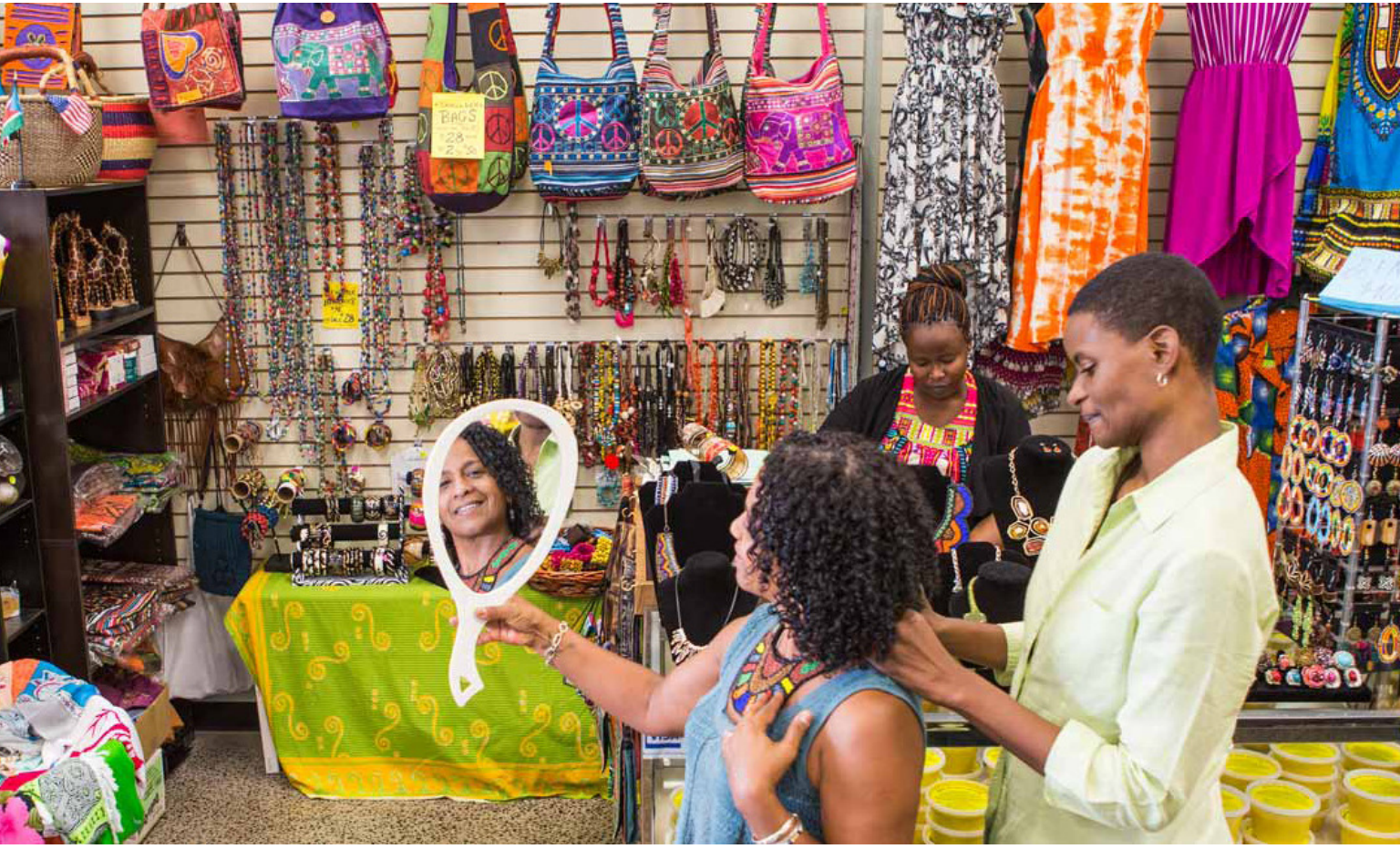
BAGS

Fig 4 - Westside-Bazaar.

Designers can more proactively address adaptivity by more intentionally anticipating future non-conforming uses in their work. In this sense, interior practices can encourage longer term spatial resilience that works to reactivate underused buildings through adaptive reuse. On the one hand, diminishing brick-and-mortar retail environments will result in less publicly-accessible territory for architects and interior designers to conceive. On the other, physical spaces left void within shopping malls and on city streets may result in a more robust and diverse independent mercantile culture focused on handcrafted production and bespoke interiors. Spatial designers across the disciplines have much to learn from the incremental remaking of suburbia into places of multiculturalism and interior urbanity. The temporal nature of retail buildings and shifting demographics fuel a vast interior territory of obsolescence and the potential for regeneration. Incremental changes leveraged through the cultural memory and limited means of immigrant and disadvantaged communities offer alternative means to foster resilience. The future of physical retail environments oriented toward a public interface will be less reliant on corporate investment, and more on the means of small merchants. Immigrant entrepreneurship and informal occupancies will continually emerge within obsolescence. Independent retailers will creatively adapt spaces abandoned by major retailers—sustaining the vitality of city streets and aging shopping malls—as well as the everyday social interactions that they foster. As such, the agency of ordinary people and their cultural imprint on building interiors compels professional designers to rethink the notion of expertise.

In the post-retail age, designers should work with an eye toward the future by assuming the probability of future alternative uses, flexibility, and an ability to respond to shifting socio-economic conditions. Interacting with informal adaptations ultimately gives rise to a more participatory *modus operandi* for design. In this sense, designers can help steward obsolete retail interiors to become unlikely incubators of cultural diversity—spaces that

support micro-economic development and independence. Thus, the creative actions of design scholars and educators should critically engage and reconsider enhanced potential for informal occupancies. The next generation of designers must be prepared to address a more culturally nuanced, porous, and adaptable means that acknowledge that diverse forms of cultural expressions taking root within these forgotten spaces. Employing community-based design methods in the spatial design disciplines—architecture, interior design, interior architecture, environmental design, historic preservation, and adaptive reuse—enhances the potential for social justice at an interior scale.

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Author Biography

Gregory Marinic, PhD is a design theorist, scholar, educator, and practitioner whose work is focused on the intersection of architecture, interiority, obsolescence, adaptive reuse, and geography. His New York-based multidisciplinary design practice, Arquipelago, has been awarded by the Seoul Metropolitan Government, American Institute of Architects, and the Association of Collegiate Schools of Architecture; as well as exhibited in the AIA Center for Architecture in New York, the Estonian Architecture Museum in Tallinn, the Dongdaemun Design Plaza in Seoul, the TSMD Architecture Center in Ankara, the National Building Museum in Washington, D. C., and elsewhere. Marinic is an associate professor at the University of Kentucky College of Design and Director of Graduate Studies in the School of Interiors. He previously served as founding director of the Interior Architecture program at the University of Houston College of Architecture and Design.

The future of the interior will be negotiated. Environments will be performative, disposed in a manner that will convey very particular ideas about utilising inside space. This section proposes that the interior can be viewed as an interface between virtual and physical spaces; a vehicle for relaying accounts of particular events, narratives, and a container of a multiplicity of interpretations relayed in numerous ways. The chapters in this section explore spaces through which research in areas such as new technologies and alternative methods of representation, can be undertaken and realised. In this section the interior is positioned as an agent of change, a space in which the traditional boundaries between inside and out are, can, or should be, contested.

Interior Futures
Negotiated

Re-Interpreting Historic Interiors to Bring the House to Life

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Abstract

This essay deals with interiors within the context of historic house museums, where in many cases, houses turned into museums lose their personal and multi-layered dimensions. They become containers for relaying particular accounts of the past from the perspective of the museum, which is often limited to one singular event, voice or time period. For future practice, we need new methods and more experimentation to research and interpret interior spaces, so that we explore their full potential in telling a multiplicity of interpretations, relayed in various ways to the public. This chapter presents *Curious House*, an exhibition in which creative practitioners explored historic interior spaces through experimentation with new technologies and forms of representation.

We are about to enter the Bishops' House museum – one of the few surviving Tudor buildings in Sheffield, UK. Because of its historical importance and vernacular architecture, this house was restored to its 17th Century appearance in the 1970s before opening to the public as a historic house museum. In the field of heritage, conversion from personal home to historic house is common practice: interiors tend to be restored to a specific period of history and used as a means to educate visitors about previous times, as well as conveying particular insights about the past. In this complex process, houses turned into museums become containers that rarely encourage a multiplicity of interpretations; rather, they tend to privilege a single narrative or curatorial perspective, which limits the history of interiors to a particular time period. They are utilised in ways that showcase "didactic illusions" of what interiors might have looked like at one time.[1] This model of preservation and renovation is described as "purist" using systematic and objective methods where the poetics of space are often lost in translation, failing to create real-life connections, quirky and emotional experiences for visitors.[2]

In this chapter, I recount the visitor experience of the exhibition *Curious House*[3] – an experiment wherein historic interiors were brought to life through site-specific interventions using creative writing, oral history, archaeological study and tactile enquiry, together with embedded technologies. Experimentation in *Curious House* succeeded in magnifying traces and voices from the past that were removed with the conversion of the house into a museum. It created new subjective, speculative and personal associations with the place that challenged the traditional way of interpreting interiors in historic house museums. In the future, I encourage interior and exhibition designers to experiment more with new technologies and ways of representing and interpreting interiors, so that domestic complexities are better exposed in order that museum visitors can more fully engage with the multi-faceted narratives of historic interiors.

The walk to Bishops' House is arduous yet enjoyable in the afternoon sunshine. Once at the top of the park, we can already discern a black and white Tudor frontage between the leaves of the trees. It is a surprise to see the old timber-framed building standing there, frozen in place as if it belongs to a distant past with its thick envelope of black and white lines surrounded by modern housing. When stepping into the reception room, we are welcomed by museum volunteers and ready to start our visit. The floors are very uneven and act as evidence of time and people – thousands of pairs of feet – who crossed this threshold through the centuries.

Entering the first room feels like the previous inhabitants have just stepped out: leftover food on the table, a few mice running around, and folded clothing on the old chairs are clues to a distant past. On the walls, the original museum boards were replaced with new interpretation panels that connect past, present and future by presenting information about the place in new ways.[Fig 1] Rather than dates and facts, they feature subjective, evocative and personal snippets of interpretation about the rooms. Each board presents a dialogue, starting with a narrator who recounts the experience and memories of one visitor walking around the house. Reading the evocative text feels like becoming part of a non-linear conversation between previous residents, historical and philosophical figures, and contemporary actors such as the museum volunteers and visitors. Everyone has a say and contributes to an open-ended and speculative conversation about the house and its occupation over time. The short interpretive snippets overlap each other, spanning multiple times, spaces and histories to gently remind us that there are many ways of interpreting historic interiors, which are appropriated and changed over time by the many people who have once visited or lived there.

Continuing our visit, we are now drawn into the main downstairs room of the house, where we can hear the sound of a vintage projector on the old stone floor sorting slides, a few seconds

[1.3]

THE HALL

The hall seemed sparse compared to the parlour. The architecture of the building is allowed to speak, although she is not sure what it was saying. The ceiling would not have been there originally, and hangs low and dark, yet not oppressive. The floor looks much like any other, and she notices that it is crumbling slightly in one corner. She clocks the plug sockets and makes a mental note of how out of place they look. This means the age of the house has taken control of her awareness of the space; she cannot remember the last time she noticed a plug socket, but here it stands out like a sore thumb.
The panelled wall has initials and a date carved into it. Her dad was once good at woodwork—he'd carve his initials into things if he was proud of them. W. B. must have been proud too.

GASTON BACHELARD

> For the real houses of memory do not lend themselves readily to description. To describe them would be like showing them to visitors. We can perhaps tell everything about the present, but about the past!

LOUISE

> What do these marks in the wooden beams mean?

WALTER BENJAMIN

> All human knowledge takes the form of interpretation.

LOUISE

> They look like a tally, or some amateur form of decoration. I assume W. B. put these in too?

Silence

Fig. 2. Beam detail [Louise Finney, 2016]

Fig 1 - "Encounters" (2016) by artist Louise Finney. 1 of 22 information boards. (Photograph by Amanda Evans).

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before a woman, through a loudspeaker, starts recounting her childhood memories of growing up in this house. [Fig 2] She was part of the last family of residents who lived in the house before its conversion into a museum. She tells us about her experience of the place as a child: the change of layout, her memories of having to use the outdoor toilets outside at night, the imagined ghost she thought she saw one day, and the secret marks carved into the beams that she never noticed before today. We look down toward the projector and see family photographs washed in daylight, gradually fading into the white wall like memories distorted through time. These give us a glimpse of the domestic interiors at Bishops' House that were removed when it was converted into a museum. The sound of the woman's voice, together with the photographs, acts as intimate testimony and shows how the house is not only about the original builders and long-gone 17th century residents, but also about its most recent and relatable history – a history focusing on less tangible aspects of heritage—on memories and feelings of people standing closer to us in time.

On our way upstairs, we notice a series of elongated black frames leaning carefully against the uneven surface of the walls. [Fig 3] Their different proportions mirror the shape of windows and other architectural features so peculiar to Bishops' House. When approaching them closer, we discern delicate lines of bold and vibrant patterns hand-drawn on tracing paper, which overlap the centuries-old timber framed walls. Each fragment of paper is gently suspended, falling unrolled towards the floor, and features decorative statements which look familiar, instantly transporting us to an earlier time—perhaps one similar to when the last family of residents lived here in the 1960s. We can start imagining the house back then, with its thick layers of wallpaper that covered the original walls, and their ancient marks are now visible to all. These ephemeral additions of decoration stand as a manifestation of vanished interiors that make us question our efforts to preserve and restore historic interiors in reference to just one particular time in history. Such fragmentary clues have the potential to display the multi-layered and ephemeral

Fig 2 - "The Girl Who Lived in Bishops' House" (2016) , by artist Rachel Emily Taylor. Mixed media installation. (Photograph by Amanda Evans).

Fig 3 - "Remnants of Domesticity" (2016)
by artist Lyndall Phelps. One section of wallpaper featuring hand-drawn damask style floral patterns and leaping stags. (Photograph by Amanda Evans).

Fig 4 - "Containers of Stories" (2016) by designer Caroline Claisse. Interactive installation co-designed with museum volunteers at the Bishops' House museum. (Photograph by Gemma Thorpe).

qualities of interiors, and show how they change through time in ways that their first residents could have never envisaged. When entering the upstairs main room, we are advised to get closer to four familiar, yet surreal, cabinets that seem to gently breathe with light. [Fig 4] It feels like they are alive as they talk to us when we take objects out of their drawers. At first, the cabinets look alike, but each actually has a different name and holds a particular story. We feel curious and decide to open one of the drawers, which reveals a collection of eclectic artefacts: an extremely soft rabbit's fur, an old key, a bare piece of bone, and a small bag with a strong floral fragrance. We pick up the key, which feels particularly heavy, and place it on a small hand-knitted doily on top of the cabinet with delicately embroidered words that say "place object here". Instantly, the cabinet comes to life; it starts singing nursery rhymes, before asking some questions prompting us to think of how time has changed. We look at each other and smile. One of us remembers the rhymes and we sing it out loud. We carry on discussing our childhood memories for a bit.

Later, we open another drawer and find more fragmentary clues: a love letter, a single rose, a woman's portrait, a small key. We place them one after the other on the doily whilst listening to the cabinet's speculation. The voice is much quieter than the first one and tells us about a dramatic love affair of one previous resident. This last encounter feels quite emotional and encourages us to empathise with the life of people who might have lived in the house. We think about our own lives and relationships, which connect us in some ways to the house, and its distant past that feels suddenly much closer to us. Our experience with the cabinets demonstrates the power of personal and individual stories in creating empathy, connections and emotional engagement with a place.

Stepping away from the one-way, institutionalised perspective of designing exhibition in historic house museums, the four site-specific interventions question the way historic interiors are traditionally interpreted and presented to the public. Creative practice

enabled us to experiment with new technologies and ways of re-presenting historic interiors, which succeeded in bringing the house to life through overlapping personal accounts of interiors within the current space. This method of enquiry encouraged a multiplicity of interpretations that was relayed in place through various media, encouraging different forms of engagement and creating opportunities for visitors to personally relate to the place. This is key for future practice, as it will help us to make historic interiors relevant and meaningful, which will help us to secure places like Bishops' House for future generations.

The author would like to thank the artists for their contribution and the museum volunteers at Bishops' House for all their support and enthusiasm with the exhibition.

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Caroline Claisse is a PhD candidate in the Art and Design Research Centre at Sheffield Hallam University, where she investigates the potential of tangible interaction and embedded technologies to engage museum visitors in new ways. She graduated from the Royal College of Art and the London College of Communication where she specialised in exhibition and interaction design. As well as teaching, she also works on cultural and artistic projects, designing exhibitions for museums and uses participatory and design-based methods to engage various communities with heritage.

Digital Futures and Responsive Architecture

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Abstract

In the late 1960s the architect Nicholas Negroponte proposed that the physical environment could exhibit reflexive and simulated behaviours, an idea that has since been widely explored. Tristan d'Estrée Sterk defines "responsive architecture" as having the ability to change its form in response to changing conditions. Responsive, being adaptable or reactive, is when the environment takes an active role, initiating different degrees of change. The advent of increased computational power and technological development has enabled stimulus-response systems to be directly linked or enabled through the Internet of Things. Since Negroponte, computers have become faster, cheaper, smaller, and capable of being injected into very small objects. This chapter discusses this aspect of dynamic architecture, relative to design experiments undertaken in inhabitable and operable environments.

In the late 1960s and early 70s, the architect Nicholas Negroponte proposed that the physical environment could exhibit reflexive and simulated behaviors (1969, 1975). This was a radical shift in thought, and made a direct challenge to the traditional understanding of architecture as a monumental and eternal undertaking. The legitimacy of this claim found support through the social philosopher Henri Lefebvre, who suggested that monumental architecture has become the signifier of the ability to transcend death, because it seems to be eternal and claims durability and imperishability (Lefebvre, 1991: 221). By contrast, the responsive environment has an immanent relationship to lived space, which, if not 'intelligent', is beginning to collect data and respond to patterns of use in real-time scenarios. While much of this ability has been enhanced by new technologies and the Internet of Things, there already exists a range of trigger/response systems in the built environment, such as automatic doors, that are often taken for granted. However, when it comes to more nuanced understanding, Sterk (2005) defines 'responsive architecture' as a type of architecture that has the ability to change its form in response to changing conditions. To this extent, 'responsive' is more closely aligned to adaptable or reactive, particularly when the environment takes an active role, initiating different degrees of change. Therefore, responsive architecture could be a result of even simple computation, or so-called 'trivial-but-serious computing'. This chapter discusses this aspect of dynamic architecture relative to design experiments undertaken on inhabitable and operable environments. One objective of these experiments is to demonstrate how responsive architecture can be realized through design prototypes. Working with a group of Year 2 Architecture students at University of Newcastle, Australia, a scenario was established about how external data can be collected and, in real-time, physically change a surface.

Since Negroponte's conceptual development of responsive architecture, computers have become faster, cheaper, smaller, and capable of being injected into very small objects.

Embedded microprocessors and sensors in everyday objects, buildings and environments, exemplify pervasive computation. It is further networked globally and inserted into 'everything' through the Internet of Things. Negroponte's 'fantasy' of responsive environments capable of feedback, was also symptomatic of a 1960s position that inhabited spaces could be rendered adjustable to the changing needs of their inhabitants (Colombino, 2012).

More recently, Ole Bouman proposed that we are in an architectural age in which people, rather than place, become the interface, with the ultimate aim of 'merging digital and physical environments in a single interface' (Bouman, 2005: 17). He suggests the advent of ubiquitous computing and asynchronic structures challenges architecture as a device that measures specific events and moments in time. Many of these ideas are embedded in his own practice and curatorial efforts to produce architecture that adopts time-based technologies, including animated surfaces, interactive environments, and merged spaces with both real and virtual interfaces. In the world of social networking, where 'human behavior is no longer framed by place,' architecture 'will lose its position as a consistent and integrated form of cultural communication' (*Ibid*.: p. 21).

For architects and designers, this is a new way of thinking, in which traditional models of architecture as a static or timeless entity are questioned, as architecture becomes a reactive agent in response to data-driven environments. Whether this data is drawn from environmental change or social interaction, architecture will be inherently unpredictable, as its 'stability' is ever changing. That is, it will increasingly engage with time.

The means of achieving any spatial or environmental change, in real-time, is dependent on how technologies are coupled to enhance not only our experience, but also how they reconnect space and time with the interior. As more people engage with digital technologies, whether via social media or technologically-derived data (bodily, sensory,

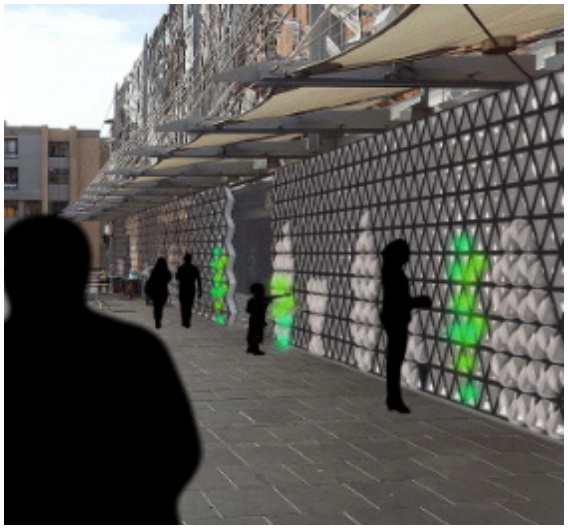
Fig 1 - Exterior of triangulated wall.

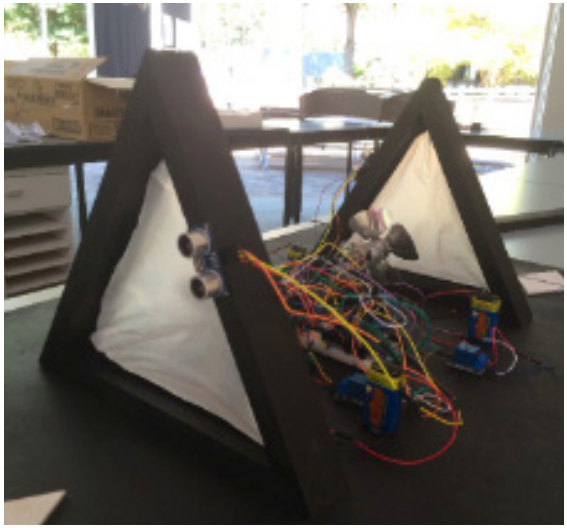
Fig 2 - Prototypical model demonstrating stimulus (movement detector) and response (reversible fan).

environmental, and so on), our presence in the physical world is increasingly mediated by constantly unfolding data. This suggests that our lives exist between digital and physical environments. Supportive technologies such as the development of wearable technologies also means that interaction with the device no longer need occur through graphical interfaces, but 'through tactile and direct contact with the instruments located on the body' (Croci, 2008: 123). Recent projects by Doris Kim Sung, Kas Oosterhuis, Decoi, and others, use both natural material properties and artificially-manipulated materials to provide an architecture that responds to real-time information. Such advances mean that the artificial or constructed environment might reconfigure itself depending on social dynamics.

Making real-time architecture

To initiate our project, a group of Year 2 Architecture students were offered the opportunity to experiment with the performative qualities of materials relative to data analysis and abstraction. From an initial individual study on literary and filmic works,[1] the literary students focused on descriptions of space—particularly when the narrative appeared to characterize space in a different manner, such as when a character revisited a place. The filmic studies represented a more abstract way of characterizing space through the use of light or repetition of sounds, as well as focusing on cinematic qualities of actors and surroundings. Exercises included such things as graphing how much time each character spent in a room, or making color spectrum maps relative to the way light illuminates a character, and so on. For the third and final phase students worked in groups to develop a realizable prototype. From the outset, this experimental studio sought new approaches to digital design thinking, that lie closer to a performative and topological approach (Oxman, 2006), rather than the traditional logic of the visual model (Schön and Wiggin, 1992). Emphasis was placed on 'proof of concept' above aesthetics, and the design and modelling processes wer documented as the presentation. Students were not invited to produce traditional scaled plans and sections,





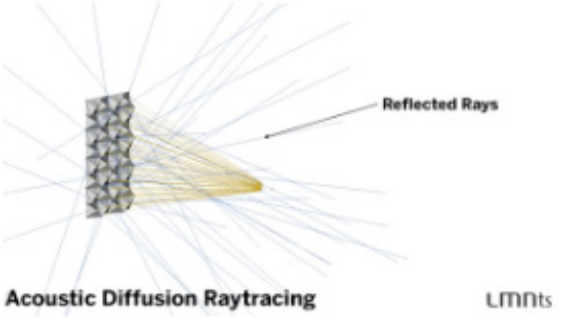
but were encouraged to understand the scale of their models.

The first project, by Tobias Fuzi, Lindsay McDonald, and Le Minh Thuc Truong,[2] investigated how a person's movement alongside an exterior wall could be registered on the other side, and vice versa. To affect this, a triangulated wall structure was proposed with an infill surface that was soft and deformable. [Fig 1]

Physically modelling properties of material expansion and contraction suggested that one method was to use plastic bags inflated and deflated by air pressure. Data from movement sensors used to detect a presence was fed through an Arduino microcontroller to stimulate a small fan motor, which inflated the pliable plastic surface on the opposite side of the wall. [Fig 2] After a short while, the fan was reversed and the surface resumed its original position. While this might seem like an amusing installation, its importance is that it develops a proactive and performative environment based on the direct communication between people and architecture.

Fig 3 -Low-res screenshot of raytracing software used to test sound diffusion.

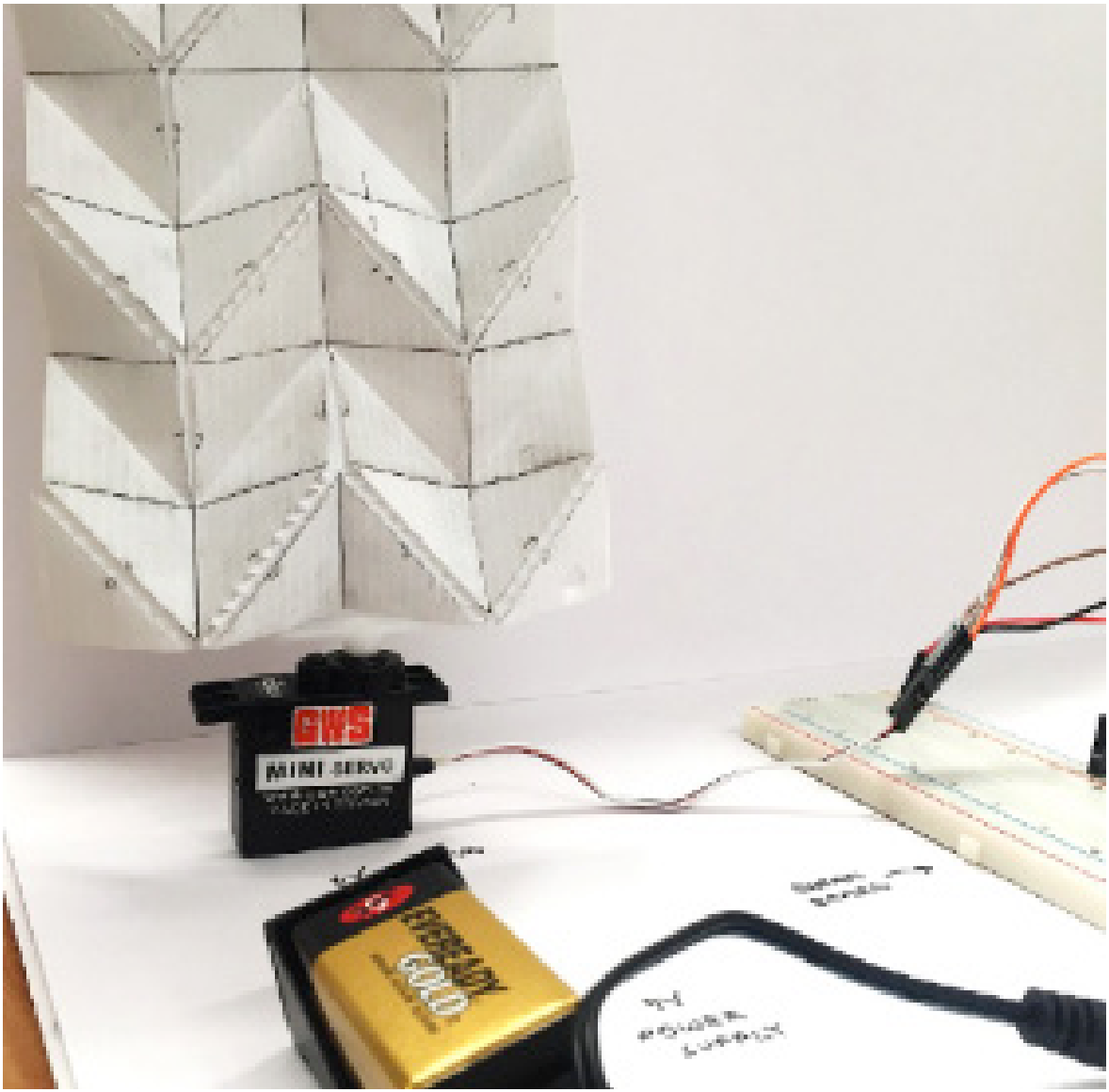
Fig 4 - Low-res prototypical model testing stimulus (sound) and response (servo actuator).



The second project is by Sam Demamiel, Emily Charlton, and Kailon Tan,[3] who focused on the way traditional interiors tend to have a static response to sound, such that sound attenuation is typically performed by fixed dampers. They tested physical models of origami folded surfaces, with a focus on herringbone patterns, alongside digital simulation using Ecotec's Acoustic Diffusion raytracing software, in order to predict sound reverberation from both flat and herringbone surfaces. [Fig 3] Although the herringbone pattern offered better results, it was found that introducing a twist into the surface created greater dispersion, and set the problem of how to control sound attenuation through this means.

To challenge the static nature of these surfaces, a mini servo motor operating as a rotating armature was introduced to one corner in order to create a variable twist. A sound sensor was used to pass data to an Arduino, which then operated the servo as a real-time interaction, such that the higher the sound level, the greater the twist. [Fig 4]

These studio examples indicate how objects and spaces can be characterized by connections, fluidity and overlaps, as opposed to the discrete boundaries and territories suggested by traditional theories, physical architecture and visually/aesthetically based constructions of space. That is, it is more closely aligned to notions of change – what the sociologist Zygmunt Bauman (2000) describes as 'liquid modernity'. This idea reflects the Marxist understanding of the 'melting of the solids' – referring to the way society as a political and economic imperative is no longer static but under question. Relative to architecture, we could say that many of the traditional understandings of architecture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characterized by being static, timeless, and universal are no longer applicable. They are being challenged, not only intellectually, but by other forces such as the digital revolution and increasing engagement with cultural diversity. For architecture, like other communities of practice, this means that we need to engage with other areas of technology and theory, not in order to replace one 'solid' with another, but to find new reference points and moments of universal comparison. Relative to the design studio, this means, for example, seeking an alternative pedagogy that is more focused on formation rather than form, and material performance rather than materials per se.

Through our work, it becomes clearer how responsive architecture develops a proactive and performative environment based on direct or indirect communication with people, and how this technological change might set the agenda for future practice. The implications are that architecture might become more environmentally sensitive, and as such engender more sustainable practices, or at least become responsive to the needs of its occupants. Future thinking as an extension of Negroponte's conceptualization of simulated and reflexive behaviors is much closer to realization, and demonstrably capable of exploration at undergraduate level. Following Oxman's (2006) research which demonstrates, for example, the incompatibility of digital design thinking with traditional design practice as measured through such things as concept, schematic and developed design, suggests the need for alternative and experimental studios. In this chapter, our approach to responsive behaviours begins to challenge the way we respond to material, structural and mechanical technologies, and how context awareness might influence their performance.

Notes

1. There were four groups in the class, one examined literature while the other three looked at film. Literary works included, Group 1, À Rebours (Huysmans 1884), Le Père Goriot (Balzac 1835), Jane Eyre (Brontë 1847) Filmic works included: Group 2, Woman in the Dunes

(dir. Teshigahara 1964), Tokyo Story (dir. Ozu 1953), Ghost in the Shell (dir. Oshii 1995). Group 3, Metropolis (dir. Lang 1927), Blade Runner (dir. Scott 1982), Inception (dir. Nolan 2010). Group 4, Wake in Fright (dir. Kotcheff 1971) Walkabout (dir. Roeg 1971), Mad Max (dir. Miller 1979), The Castle (dir. Stich 1997).

2. This project was conducted at University of Newcastle, Australia. Studio Directors: Mark Taylor, Neena Mand, Ian Owen and Nick Foulcher. Student Group: Tobias Fuzi, Lindsay McDonald, and Le Minh Thuc Truong.

3. This project was conducted at University of Newcastle, Australia. Studio Directors: Mark Taylor, Neena Mand, Ian Owen and Nick Foulcher. Student Group: Emily Charlton, Sam Demamiel and Kailon Tan.

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Thresholds of the Future

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Abstract

Positioned at the interface between interior practice and philosophies of conservation, this chapter concerns the future of historic interiors where space, time, materials and people are intertwined in an unfolding process. New Materialist thinking shifts away from static, layered concepts of historic interiors, to a discourse on vital matter as assemblage. It invites new, poeticized methods of interior representation which reveal human and nonhuman actants performing uncertain, unstable trajectories.

The normative practice for investigating historic buildings requires recording through orthogonal measured drawings, photographic documentation, and objective specialist description. These investigations form the basis for informed decision-making about their futures. Articulating subjective, emotional experiences and understandings of historic sites generally falls outside of professional disciplinary traditions. There is a tendency to revert to more orthodox conservation values which privilege knowledge of material fabric and academically-described historic importance. Historic buildings are conceptualised as documents waiting to be read, with fixed narratives and layered chronologies that can be revealed through empirical analysis. This is expressed in dry, objective language and expert vocabularies. Traditional forms of visual orthogonal architectural representation fix them in time. Historic England advises that field investigation "[i]n most cases [...] will involve direct observation of the building in order to ascertain what information it provides about its origins, form, function, date and development."[1] This says little about ongoing processes of making, unmaking and remaking that occur through both human and non-human actions at historic sites. It ignores the flows of natural and cultural matter that are constantly at work - the inevitable progress of decay and the actions of those who care for the place and seek to keep it going.

Positioned at the interface between interior practice and philosophies of conservation, this chapter investigates historic interiors as sites where space, time, materials and people are intertwined in an unfolding process. New Materialist thinking shifts away from static, layered concepts of historic interiors to a discourse on vital matter as assemblage. It invites new, poeticized methods of interior representation which reveal human and nonhuman actants performing uncertain, unstable trajectories. These methods acknowledge a multiplicity of interacting agents —"like all material things, buildings are composed of a heterogeneous,

often a changing collection of components that, irrespective of its provenance, are forms of vibrant matter.''[2] The concept of vital materiality invites consideration of what things do rather than what they are, and suggests that we horizontalize the relations between humans, biota, and abiota" drawing "attention sideways, away from an ontologically ranked Great Chain of Being and toward a greater appreciation of the complex entanglements of humans and nonhumans.[3]

As a case study for rethinking the future of historic interiors through vital materiality, Wymering Manor is a historic site in transition, its destiny not yet determined by a defined strategy. Originally constructed in 1581-2, it became a youth hostel in 1960. Following the collapse of the ceilings in the northwest corner, it was abandoned in 2006. It was acquired by a community preservation trust in 2014, formed of local politicians, professionals, residents and other concerned individuals. The trustees and other volunteers are working to restore the Manor and to find a new use to secure its future. Whilst the Manor continues to deteriorate, its historic timbers crumbling through the actions of moisture and beetle larvae, nevertheless its walls are repainted, its floors newly carpeted, and events and activities set up, creating constantly shifting material assemblages that denote a community's aspirations for the future. Drawing on Jane Bennett's New Materialism, the house is discussed as assemblage, as material having affect. As W. J. T. Mitchell notes, "objects are the way things appear to a subject -that is with a name, an identity... Things on the other hand,...(signal) the moment when the object becomes the Other, when the sardine can looks back, when the mute idol speaks."[4] This essay focuses on the unstable compositions of three thresholds within the Manor and the spaces they demarcate in order to examine how things draw us in and how when we shift our focus to the material and immaterial affects of historic sites we might practice differently. The thresholds are examined through referencing 'thing-power' as defined by Bennett, "the lively energy/and or resistant pressure that issues from one material assemblage and is received by others."[5]

Fig 1 - Door to the Principal Bedchamber.

Our aim is to develop representations that are 'thick with time,[6] away from abstract lines that fix buildings in space, and towards a language of affect. We use photographic images and on-site creative writing as a process to materialise the affects of the house and the archaeology of its histories. Luce Irigaray "calls upon architects to build continuously changing "thresholds" that embody the physical, tactile and emotional power of relationships between individuals."[7] This challenges the territory between our normative disciplinary practices as an interior designer and a historic building conservationist; of relationships to each other and to the communities working at the Manor; as well as the clusters of continuously changing objects, props, and events within it. Rather than being on the outside looking in, we embody the house through these methods, softening our professional and disciplinary viewpoints to acknowledge the desires and longings of the community for the future of the Manor. This mode of practice draws on knowledge-making that is "derived from the inextricable and necessary relationship between biological processes, affect and language."[8] It offers validity to the unspoken voices of of human and non-human entanglements, and to alternative tools, practices and performances for interior-making.

The Manor is a remarkable assemblage of architectural fixtures and fittings, of doors, fireplaces, panelling, staircases and decorative features that, over the centuries, have been imported from other buildings or have circulated to new locations within the house. These architectural elements bear the traces of their former sites and uses, surface presences and absences that offer clues to their past—panelling cut down to fit new spaces, ghosts of old hinges, doors that have been fashionably remodelled with new mouldings.

As the community of trustees and local volunteers works to remake the house for the future, they create new material relations as they repair and update the fabric and bring in new props and furniture to stage the interiors for events. The house is continually arranged

Fire door
keep shut
Mind the Step

Fig 2 - Door to the Drawing Room.

and rearranged drawing visitors on a journey of discovery of shifting objects and materials that create new experiences at each visit.

Threshold as Assemblage

This door with moulded panelling on the first floor landing of the Manor marks the threshold into the large chamber over the great hall. This was once the principal chamber but was subdivided to create dormitories for the Youth Hostel sometime after 1960. Experts debate its age, it perhaps dates to the 17th century (which would confer importance), or could be a 19th-century copy. It has been imported from elsewhere, and has been cut down to fit a narrow opening.

In the Youth Hostel days, the door marked the entrance into Room 3 off the landing, but the threshold that it previously demarcated can only be guessed. Within the thickness of its glossy black paint are the faint traces of earlier ironmongery, experienced as surface irregularities —barely perceptible indentations and shadow-lines that only reveal themselves through forensic looking or fingertips lightly brushing the surface. The door carries warnings of danger, 'Mind the Step', 'Fire Door - Keep Shut', a remembrance of the Manor's time as a Youth Hostel which continues to caution visitors today. Graffiti on a reused piece of MDF covering a modern lock mechanism seems mildly offensive and irreverent.

Visitors now step through the door from the carpeted landing into an empty, furnitureless space with bare floorboards and no purpose. The old chamber is painted in bright yellows and powder blues from its Youth Hostel days with little attention to historical narratives or values. The floor creaks alarmingly.

This threshold acts as an assemblage of 'things', as a set of materials that create an active calling.[9] The door has a powerful capacity to draw us in through the vibrancy of its materialities, it animates our imagination and our responses to it are visceral. We use Bennett's ideas of 'thingness' to ask, what happens if we take our responses seriously and allow the assemblage

Fig 3 - Door to the former dining room.

of materials to call us?[10] How might we re-future our approach to historic interiors if we allow ideas to emerge through material presence and affective capacities rather than through a predetermined plan developed in the remoteness of a design office?

Threshold as transitions through space and time

The threshold between the great hall and the former drawing room makes evident the community's engagement with the Manor. The hall has newly-painted bright red walls, pictures hung for a theatrical event, and objects that have been sourced or donated from elsewhere, leading to new spatial narratives and clusters of affect. The room has been re-dressed and remade for community use. The door into the former drawing room marks a stark transition from one affective space to another, from a bright, well-used interior to one in a ruinous state where the demise of the Manor appears imminent. The drawing room has a colonnade of acro props which support the weak and sagging timber frame. These sit on an earthen floor that has been infiltrated by small creatures and plant roots. The smell of the damp earth and rotting wood is powerful, and evident here are the inhuman actants that slowly eat away at the 16th-century timbers.

This threshold unfolds time with the reworking of historic panelling, doors, doorcases and architraves from different eras, brightly painted on one side, concealing ruination and collapse within. Inside the drawing room contemporary office furniture is stacked disrespectfully alongside the weak and crumbling Tudor timber frame. Generally the door is kept closed. A notice from a recent disaster-management planning exercise is pinned to the door, 'By order of MAS Government, Do Not Enter'.

This threshold draws us in, as the shift in surfaces from one space to the other make apparent the presences and absences of different times. The door acts as an emotive passageway through space and time, rather than a static historic artefact to be circumscribed by orthogonal modes of representation

and empirical description which seeks to disentangle its chronologies and define its value. The intertwining of materials and the 'thing-power' of the threshold from the hall to the drawing room elicits a calling-in.

Gestures for the Future

Like the rest of the great hall, the late-18th-century panelled door leading into the former dining room was painted by volunteers in cheerful red and white on the main hall side. Operating on a shoestring budget, the volunteers repair and update the Manor's interiors using domestic tools and materials. Their new decorative scheme for the hall brightened the formerly dark, faded interior to create a fresh and inviting space for visitors and events that reflects buoyant optimism for the future of the Manor. New carpet was laid at little cost. Random modern door knobs on the hall's historic doors were replaced with high-quality period ebony and brass turned beehive knobs that sought to bring coherence to their public faces. This modest act denotes an aspiration for period restoration for the Manor. Curiously, this door has been reversed at some unknown point, and its higher-status moulded, panelled surface now faces into a room too fragile for public access, its bare floorboards too weak to carry the weight of visitors. The dining room was inhabited by the security guard and his dog when the Manor was vacant after the departure of the Youth Hostel Association.

The old dining room now serves as a 'backstage' area for community events, containing props, models and equipment. The house is brought to life with various theatrical events that utilise the period atmosphere of the interiors. For a production of the play 'Murder at Martindale Manor' actors used this doorway to move from a makeshift 'green room' to perform in the hall where the audience sat on a raised dais. Visitors were invited to suspend notions of reality and fiction as the hall became the stage for a period house party and a melodramatic murder. These events respond to the desires of the community to reanimate the Manor's historic interiors on their own terms and to share in their enjoyment of its theatrical atmospheres and affects.

Wymering Manor is a building in transition, an entanglement of matter, a site of material flows and of 'working into' rather than a 'palimpsest' of superimposition. The house is not abandoned and ruinous, nor fully reused and reoccupied, but in a state of becoming. It has not yet been subject to an academic conservation scheme based on detached evaluations of significance within the broader framework of cultural heritage principles and practice. Its interiors have not been shaped by formal design programmes and processes. Rather, its values and meanings are negotiated through a more situated, persistent entanglement with the place, through intimacy and gradual knowing. The complex interplay of staged homeliness, comfort and familiarity, the lingering anachronisms and modern debris, the uncertain trajectory and the hauntedness of dereliction elicit more potent emotional responses than those occasioned by a homogenised, conserved and museumified site. The house evokes a sense of feeling and longing for those that visit, of past histories and of real and imagined homes. In its current state, it allows for the multifarious aspirations and longings of those currently caring for it and concerned for its future. The action of using inauthentic paint to 'cheer up' the interior, the use of 'authentic' door knobs, scene-setting with anachronistic props, and doors serving as cues to introduce remade spaces and reimagined interiors—in these ways the Manor grows ever more tethered to its community through the vibrancy of its matter, an animated space that perdures. The intra-actions of the community bring a mingling of people, bodies and things, an acting from within these relationships rather than from outside. This thinking transforms our relationships with each other, with materials, matter and discourse; it has the ability to allow new forms of representation to emerge.

New Materialist thinking, through Bennett (2010), suggests a future where inside and outside boundaries and chronological time frames are lost. It allows us to loosen how we think about historic interiors, from the idea of an enclosure to one that coalesces material and immaterial relationships of matter, of constellations of past and present actions.

Values and meanings are negotiated through a more situated persistent entanglement with the place, through intimacy and gradual knowing.

Processes of creative writing and photographic representation allow the assembly of everyday transitory moments in time. By responding to unfolding scenes, our disciplinary viewpoints soften and become more receptive to the affective matter of the house. In this way, the overlapping of historic conservation and interior practice with concepts of vibrant matter positions the interior as an agent of change, a space that re-figures human and non-human relationships, where the material of the human body and the natural and cultural world are coincident as investigative tools for the historic interior.[11]

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Interior: Twelve Points on the Phenomenology of Empire

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Abstract

Written as a set of polemical theses, this chapter asks considers interior not only as a spatial condition, but as an historical condition ('Interior') embroiled in the construction of Empire. Interior describes the spatial, material and architectural responses to the birth of industrial capitalism and its attendant liberal Nation-State, arguing that the vast, spectacular spaces it realized for society to discover its new relations to capital were indistinguishable from new modes of security it required to enjoy these. It contemplates the political and social valences that continue to animate this condition today, in a tendency of contemporary architecture to design ever grander interiorized spaces.

1. Interior is an absolute condition—it both precedes its own construction and defines itself in contrast to nothing. Interior has no exterior.

2. Interior is meta-architecture: it is the technological attempt of architecture to transcend itself through the act of pure enclosure—an architecture so vast as to contain the world. It is architecture separating itself from itself. This is why the objects that constitute the space of Interior are a kind of inchoate architecture—an architecture which, separated from itself, becomes senseless.

3. Interior is historically produced. Benjamin's famous interrogation of the nineteenth century interior found it to consist of multiple forms—multiple interiors existing in tension with one another and thus standing in contrast to a general exteriority of the modernizing world beyond. The domestic interior achieves a level of withdrawal from the 'reality' of capitalist labor precisely in its opposition to the space of work, the space of the commodity (arcades). Here, interior persists in the classical sense of a space known and perceived in its negation of exteriority. It is a space in which illusion dictates, protecting the individual bourgeois from the trials of labor that reside in its invisible exterior. It becomes the cocoon of natural eternity, immune to the modernizing city outside, the experience of the arcade, the micro-politics of capital. This is interior in gestation. If interior was, for Benjamin, the space of a withdrawal from the world, today, interior has replaced the world. Withdrawal is no longer possible.

4. Interior admits no limits, despite the fact that limits are what define it. Interior is sea-like architecture. It is fluid space without dimensions, whose orientation is permanently relative. Just as Interior has no limits, it is decentralized, perceivable only as a horizon. Interior is topological. Neither experienced as a legible space nor understandable as architecture, the meta-architecture of Interior appears by rendering concrete what is virtual in origin. It is spaceless.

5. Interior admits no negativity. This is not because it precludes negativity, but because it translates it through a lexicon of positivities; it conceals it through gestures, encapsulates it in casual swaggers, it molds it into a confident stride. It interiorizes negativity as a thousand mobile interiors circulating across its smoothness. Negativity as such is never constructive since it remains always partial, forgotten, embryonic. Negativity in Interior thus becomes pathological, precluding its conscious mobilization as a directed rupture.

6. Interior is a relation of transparency. Interior has no cracks, no nooks, no obscurity. Shadows exist only to project the otherwise invisible presence of interior. It is a space of total illumination. It is the infrastructure which enables a total visibility of human behavior. Interior is where life is coerced by exposing it to itself. It is conduct made spatial. Interior is a space felt through interpellation. It is a space of voluntary yet total participation. Its power is passive and increasingly relies on the spatial effects it produces by exposing life to the sublime terror of sharing a single, crystalline space. Its architectonics mold social relations into quasi-occult gestures, signaled codes—communication as pure form without content—a totalizing transparency that presses all opacity into a paranoid non-relation to the self. It is the electrification of the socius with an anxious potentiality—a totalizing charge that reduces life to its generalized conduct. Interior is an architecture of silence. Yet in its monopoly over silence, it forbids silence from those who inhabit it. It is a space of coerced chatter. The space of interior speaks endlessly one phrase: "everything is ok."

7. Interior is an architectonics of crisis. It is Empire's insides. It reconstructs the world as a world of interiors. Yet because interior is not so much an architecture, we could say that it is instead the phenomenology of Empire. Lacking a spatial exteriority, what stands at the threshold of Interior, permanently pressing in on its delicate transparency, is crisis. In the theatre of crisis, Interior deploys contingency to assert an

atmospheric, displaced authority. It is law made immediate, spatial, affective, total.

8. Interior is a technology of subjectivity. Yet far from producing subjectivity, the glassy horizon of Interior destroys it since the operative consistency of subjectivity would presuppose the singularity and visibility of power. In its place Interior manages the perpetual coordination of life not as a mass of bodies (as in Hobbes), but as a homeostasis of individual bodies, each enacting its own machinic trajectory in space. Interior displaces. It demands perpetual motion. It achieves stability as an equilibrium of non-aligned bodies set in constant motion. This is why the only orientation interior permits is that relativized to each individual body. If all motion stops, if motions begins to cohere into motion, its stasis is compromised and interior becomes dangerous, volatile.

9. Interior is the 'inferno of the Same' (Byung-Chul Han). Interior thrives on a currency of terror produced by constructing itself as an arena of potentially limitless Otherness. It is this terror which gives consistency to the experience of interior whose neutralization is guaranteed by the universally voluntary abandonment of human countenance. Interior eliminates the Other amidst a mass of circulating bodies. This is why images that depict interior always privilege the body from the back.

10. Interior is implosive: Security is experienced as the act of interior collapsing in on a point of irregularity. It is perhaps the only time when interior momentarily leaps forth from its atmospheric invisibility, only to evaporate again into the void of its perpetual peace. Violence, in Interior, is the sudden shift of background to foreground.

11. Interior annihilates history. It squeezes time with the pure gravity of its total illumination of the present. Time in interior collapses in on itself into a single point. Surrogate histories abound within a space-time in which risk presents itself in the permanence of its absence. Interior is the unfolding of future in realtime.

12. Interior preserves life by ‘futureproofing’ it. It is a crystalline Leviathan, the silent sky under which life voluntarily reproduces its most innocent, automatic gestures.

Author Biographies

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Textural Interface: A Design Fiction

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Abstract

This chapter presents a *storyworl*d, a design fiction, in which we follow the characters of the Architectural Intelligence (AI) and the Interior Designers (IDers) as they collaborate with *the interior* to create and construct a sensory and immersive experience based around narrative and storytelling.

Fig 1 - Exploration of visual network and narrative to pilgrimage Roach Folly.

A design fiction, as described by science fiction author Bruce Sterling,[1] allows us to suspend disbelief about change while at the same time open up space for discussion,[2] by using prototypes within a 'storyworld'.[3] Here follows our design fiction, which details the ways the interior works in the future, through the storyworld of an interior designer (more affectionately known as IDer). This chapter offers a provocation to designers to question methods and modes of social interactions and the role of *the interior* as an agent of change.

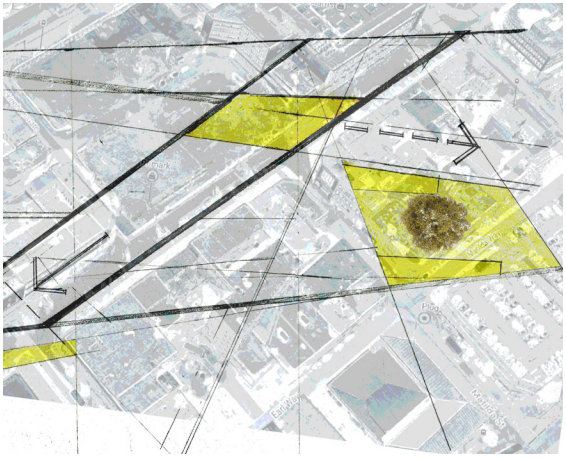
Humans evolved in a natural world, with only the last few decades dominated by digital technology and virtual worlds. This inherent connection to nature is dominant in everyday life, and can be triggered by daily tactile interactions.[4] It is specifically through the sense of touch that memories are triggered and made, senses are heightened, and moods are enhanced. One of the IDers' most valuable attributes is to truly understand potential sensory, emotional and social impacts when occupying a space. Their sensitive integration of environmental stimuli can positively inform the psychological stages of perception, cognition and behaviour, ultimately affecting the emotion of occupants.[5]

In this design fiction, non-human Architectural Intelligence (AI) systems control building ideation, design and specification, ensuring a more productive, streamlined and cost-effective approach. This post-BIM (Building Information Modelling) world sees the speedy advancement of data-driven networked thinking and connected building projects take over the creative and cultural role of the designer.[6]

Interior Futures are driven by a thirst for technological advancement, automation of process and uniformity of shape and space. It is recognised that the IDer has an integral role to play in the creation of a spatial interface. We conceptualise *the interior* in this chapter as a conversation space—an interface to encourage people to interact between the digital and physical spaces, the IDers and the AI.

The Storyworld

IDers and AI collaborate to reveal stories behind place and setting, drawing connections between heritage, materiality and building narrative. AI navigate an array of attributes and dynamic patterns based on functionality and sequence in space, while IDers construct stories of emotional significance defined by human experience.[7] The IDers are the textural interface for the AI—they possess the sensory feedback mechanism the AI so desperately yearns for: materiality and a textural understanding and warmth. This collective ability to draw from the world around them, giving order and meaning to stories and experiences, evolves into a spatial intelligence combining an immersive sensory environment with a new interior future.[Fig 1] Illustrates a project, *Roach Folly* celebrates the optimum viewing position of the last tree in Yorkshire, in which the interior draws together the emotionally significant stories of the trees and the people who lived alongside them. The proliferation of the Internet of Things (IoT) means that more-than-humans[8] also have a digital history. Anticipatory ethnography[9]



imagines the possibilities of the everyday life through experiences, spaces and places, humans and more-than-humans inhabit. Drawing together the practices of big data analysis and anticipatory ethnography, the AI and IDers create insights which offer new understandings.

There is a continued dichotomy between the importance and power of big data over deep data. Data from the *Aug* (what we, in the present day, call social media) is monitored and analysed

Fig 2 - Mixed reality cocoon interior to enhance a state of relaxation.

Fig 3 - Characterful and highly desirable found driftwood. Circa 2045.

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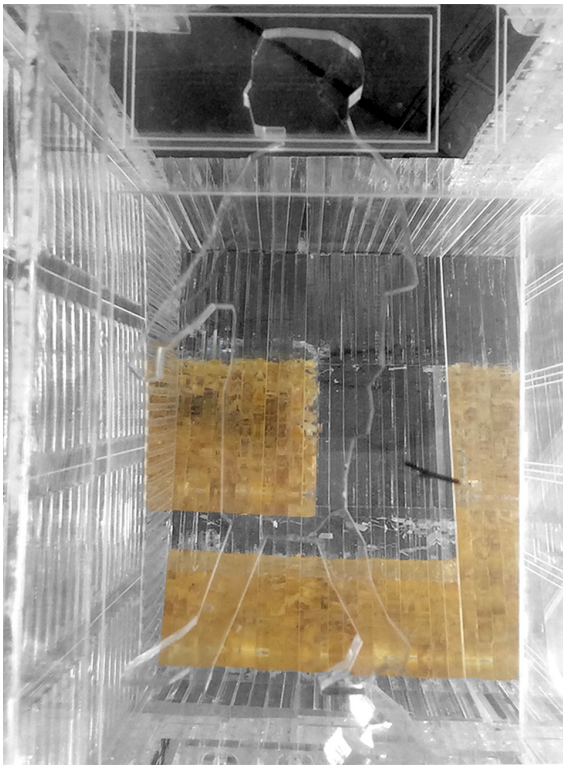
by the AI to enable digital inside experiences to be documented and their emotional affect shared. The AI acts as the gatekeeper for the harbouring of online data, and connection to the Interior syntax. 73 percent of adults between 18 and 65 now use the AI, sacrificing conversation for ease of online connection and cost-effective design, thus jeopardising physical and psychological interaction. The *Aug* is having catastrophic effects on humans, provoking a false sense of connection.

The IDers understand how to translate data from everyday experiences, such as heart rate, body temperature and eye movement, and use this data to create spaces that support the needs of inhabitants' emotional states—for example, to relax an anxious person by creating a multisensory responsive environment. [Fig 2] They listen, empathise and enact data provided by the AI. They care about why the data was created, and they work to understand the potentials of *the interior.*



The IDers' innate expertise in the process of layering materials, tones and texture, results in tactility, warmth and receptive moments within a space—all fundamental elements increasingly craved by clients. They connect with nature

and interact with raw materials, and make adjustments to the level of stimuli according to the function of the space. Environments promoting rest will differ to those supporting social interactions, and it is the IDers' skills and expertise which acknowledge this. Their motivation is to conceive a desired atmosphere through the process of gathering, responding and reacting to the emerging sensory palette. Thoughtful interior application of raw materials ensures that human connection with the multisensory natural world we evolved in is not lost. Clients crave individuality, rarity, environments and artefacts with narration and meaning that have been designed and built with skill and consideration. Reclaimed furniture is scarce, as are raw materials such as wood and wool. Landfills post-millennia continue to be mined for consumer waste, where plastics have high value. Materials and objects within the tangible, analogue world are recycled, reused, reclaimed, or re-appropriated.

The AI looks for waste and useable materials. It scans items, looking at composition and

potential manufacturing processes. The AI works together with the IDers, looking at possible potential outputs for the tactile and precious resources that are ever-decreasing in quantity, and ever-appreciating in value. [Fig 3]

The end

This storyworld gives a brief view into potential future fictions of *the interior*. Collaboration with an interdisciplinary computational research interface, combined with sensory sourcing and social responsibility will all determine the designer's place in this future world setting.

Fig 4 - Sensory application.

Advances in computer modelling and construction, alongside the manufacturing process of 3D printing, will result in an increase in modular builds and integrated components. We start to see the interior as a series of physical and digital spaces crafted using Augmented Reality (AR), Virtual Reality (VR), and digital resources. Designers will continue to draw, design, prototype and construct, to ensure a socially responsible approach. [Fig 4]

Design, by its very nature, is concerned with the creation of new things and solutions, and is therefore connected to the future. In a changing landscape of how we learn, work and interact, technology is increasingly sophisticated, opening up new opportunities to connect globally, and linking communities, workers and societies. Key skills such as critical thinking, problem solving and creativity will be in demand in the future workplace, as they are difficult for computational systems to replicate, illustrating the fundamental role designers will continue to play.

We see *the interior* as an agent for positive change, which is instrumental in the evolving, multispecies world. The illustrations in this chapter offer ways of seeing, responding and making *the interior*. The narrative experience of Roach Folly offers a place for intergenerational storytelling, a monument of human behaviours left behind. The role of *the interior* is to translate the layers of complex data created by humans and more-than-humans, to understand their innate desires. The importance of being able to source and work with multi-sensory and raw materials with the interior is valued.

Our provocation asks you to embrace the interior and to question your agency in the Interior Future.

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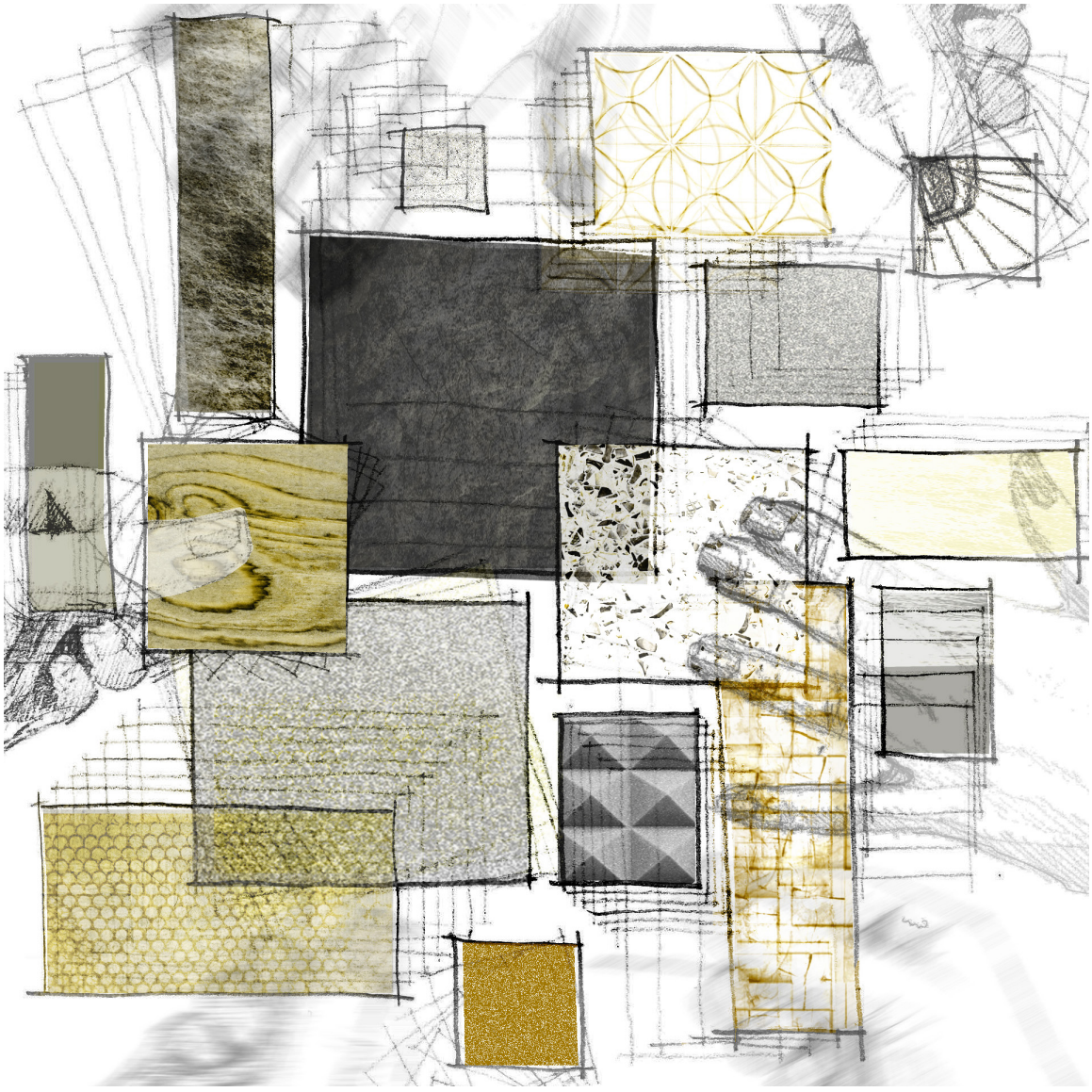

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Author Biographies

Eve, Sally, Steven and Rachel are all lecturers within the Sheffield Institute of Arts at Sheffield Hallam University. They teach on the Interior Design undergraduate and postgraduate courses. Their research interests are varied, but all are underpinned by a wish to design with social responsibility. They have an interest in the proliferation of digital spaces within our everyday lives, and they are all driven by the notion of using design as a form of activism to encourage positive change for a more sustainable future.

A New Image for Interior and Interiority

Suzie Attiwill
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Abstract

This text presents a new image for interior and interiority in a dynamic relation with exterior and exteriority; one which positions interior design as a critical twenty-first century practice.

To speculate on the future of interiors and interior futures, the tactic of this chapter is to pause rather than project. The idea of 'the future' is a complex proposition on its own, let alone coupled with 'interior'. Modern design is replete with accounts of utopian futures, and the idea of the future has been rendered as an interesting problematic within disciplines such as history and philosophy. So, to pause – here and now – in the present as a composition of pasts and futures – and pose the question of interior and interiority.

Despite the title 'a new image for interior and interiority', there are no images accompanying this text. The use of the word 'image' here is not as an image of something or a condition, a representation or illustration, but rather as an image of thought – a concept. 'Interior' and 'interiority' are concepts with histories that shape ways of thinking and have implications for interior design practice. However, there is relatively little theoretical or philosophical enquiry into these concepts as part of interior design – a practice of designing interior. A practice and theory split maintains dominant images of interior and interiority as equated with space and subjectivity. This is not to overlook the significant contribution of texts which engage with the critical examination of these terms; yet these tend to be historical analyses of existing interiors and conditions of interiority, as distinct from an engagement with and through current practice.[1] Here in this text, I am interested in thinking through practising with 'tomorrow's interior designers'.

As flagged above, there are dominant images – as concepts of interior and interiority – in interior design that subsist and insist through practice and pedagogy. One is the habitual reference of interior as 'the interior'. As a noun, interior is equated with an idea of space as form – as enclosed space – and this then implicates the necessity of structure and geometry, such as architecture. The second is 'interiority' which is equated with the idea of the self as inside something, and as a self of the individual and personal. While there are variations, these are dominant images of thought which inform and shape ways of thinking and doing interior design.

As concepts, these have a genealogy composed of Platonic and Cartesian mind-body philosophical ideas concerning truth and knowledge, subjectivity and objectivity, subjects and objects. The implications of this for interior design practice manifest in an understanding that assumes interior and exterior as a dualistic relation. Examples of this include the emphasis on a human-centred approach, defined as working from the inside out, i.e. from the centred human subject as a psychological or phenomenological self; existing conditions which can be represented; abstract concepts such as 'well-being'; and the call for 'a science of human experience in the built environment'.[2]

The division between interior and exterior is confronted by current forces which challenge this set of interests, and expose an attitude of superiority over the environment – a division which is not particularly useful in the twenty-first century, where technology is transforming notions of private and public; where human impact on geology and ecosystems has created a new geologic time period, the Anthropocene; where flows of capitalism and globalism render subjectivity and objectivity as consumer products, truth as data and the individual as object; where cities have become '*continuous interiors*';[3] and where it seems 'we nowadays live in a world that has no exterior side, neither politic nor geographic'.[4]

The International Federation of Interior Architects/Designers has defined the role of the interior designer as a practitioner who 'determines the relationship of people to spaces based on psychological and physical parameters, to improve the quality of life'.[5] As a discipline that attends to the relation between people and space, interior design could play a vital role in responding to these contemporary social, cultural and ecological challenges, through attending to the historical and philosophical division of interior and exterior. This involves a re-posing of the dominant and habituated images of interior and interiority as space/physical and people/psychology, as 'the interior' and individual subjectivity.

In this pause – here and now – let's sense the outside of flux and flow. An image for thinking this

is the philosopher Gilles Deleuze's description of a spider in her web: she 'sees nothing, perceives nothing, remembers nothing', she 'answers only to signs' on a visceral level to the slightest sensation of vibration and contracts a series of instants.[6]

What does this, as an image of thought, enable us to think in relation to interior and interiority? This spider in her web is in a network of relations. There is an interconnectedness between a thing and its relations, in the world where a division between interior and exterior doesn't work. The spider is not a subject – at least not yet; her responses are not based on perceptions and memory – she 'sees nothing, perceives nothing, remembers nothing' – but are visceral; bodily rather than mind over matter. Vibrations – changes and variations in this relational field from which she is inseparable – produce sensations and her interest is held. Contracting this sensation produces a sense of belonging to something and the sensation of being somewhere.

Deleuze's interest in ethology is useful here in thinking about interior design as a practice addressing the relation between people and environment. He writes:

> "the important thing is to understand life, each living individuality, not as form or as a development of form but as a complex relation between differential velocities, between deceleration and acceleration of particles. … relations of speed and slowness, of the capacities for affecting and being affected … characterize each thing. For each thing, these relations and capacities have an amplitude, thresholds (maximum and minimum) and variations or transformations that are peculiar to them. And they select, in the world or in Nature, that which corresponds to the thing; that is, they select what affects or is affected by the thing, what moves or is moved by it." [7]

As an image of interior and interiority, a spider in her web shifts from being a subject and object (the fly) in space to a composition of forces where relations and capacities produce a spider and her world; 'the inside as an operation of the

outside … an inside which is merely the fold of the outside …';[8] 'the Outside-interior'.[9]

Thinking more specifically in relation to interior design practice, the act of selection becomes charged in unexpected ways. An important part of interior design practice is the selection and specification of materials including furniture and furnishings, lighting, colours and fabrics. These are brought in and arranged as a spatial, temporal and material composition. Like the spider in her web, we could think of this as a network of relations and capacities; interior designing as the fabrication of a space 'in which sensations may emerge, from which a rhythm, a tone, colouring, weight, texture may be extracted'.[10]

Further to this, Deleuze presents two criteria for selecting: one on 'the basis of existing criteria – existing representations, recognized perceptions and feelings'. This is habit, where 'the outside is only the projection of our habituated interiority'. The other is 'selecting what is new, what challenges or troubles habituated experience';[11] an encounter with the outside of flux and flow.

> 'The interior is a selected exterior, the exterior a projected interior'.[12]

This dynamic relation and the process of selection as a technique in the production of interior and exterior, interiority and exteriority, positions interior design as a critical twenty-first century practice.

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Square Mythologies: Extending the Boundaries of Narrative in Enclosed Spaces

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Abstract

Square mythologies are a provocation about the nature and the potential of interior spaces. The chapter is particularly focused on the concept of 'enclosed spaces' and looks at how language can become a creative tool for these spaces to be enacted and performed. The chapter challenges the idea of 'Interior Futures' and describes a way to test boundaries and redefine the spatial and temporal construction of narratives within them. Samuel Beckett's teleplay *Quad* serves here as the example of enclosed space upon which the problematic of the chapter unfolds.

Fig 1 - Quad's textual narratives.

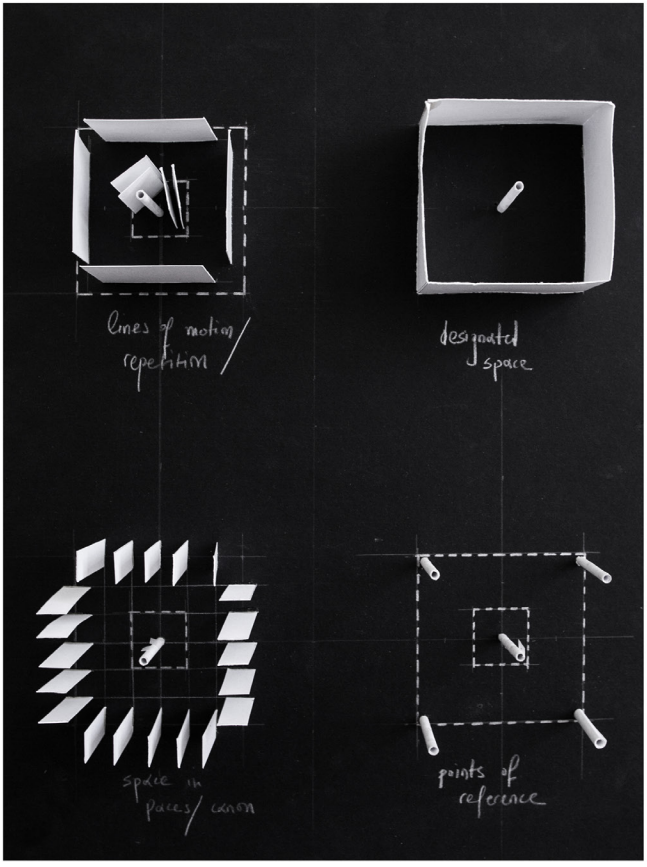
Fig 2 - The construction of space through text.

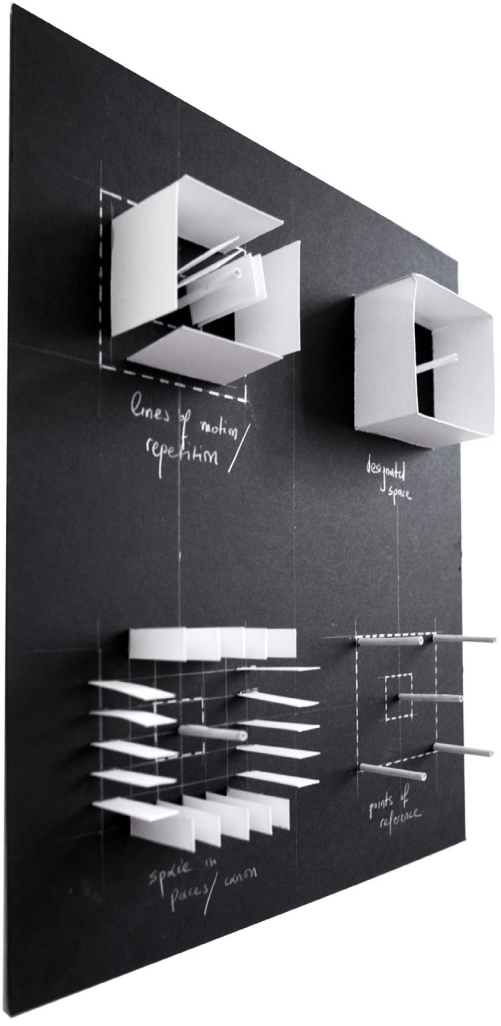
Samuel Beckett wrote *Quad* in 1981. He described it as a piece for four players. *Quad* is a square space with a designated centre. The four players move along the surface according to a particular course, with the single aim to avoid the centre and each other.

Quad is a work about language. This might seem paradoxical, especially if one considers that within the performative space of *Quad*, no language is being transmitted. However, more than words, in *Quad* Beckett is concerned with the capacity of language to fabricate narratives, with the capacity of language to go beyond what is formal to what is variable, to what remains unsaid. In other words, Beckett is concerned with the exhaustion of language per se, as a means to explore the possibilities that unravel within the enclosed space of a square.

In *Quad* , Beckett explores language in terms of processes—the language he uses is no longer attached to objects and meanings, but is a sort of system to re-invent the delimited square space and its boundaries. Beckett makes use of the formal to arrive at the formless; he designed an iterative structure only to explore the potentialities of the unstructured that comes from repetition. In this sense, the Beckettian language of *Quad* is what Deleuze describes as the "image-refrain,"[1] or what I call an "image-unit"[2]—a structural element that allows for the composition, decomposition and recomposition of the quadrilateral space.[3]

Quad's performative space not only derives from, but is constantly constructed by, the play's textual form. Lacking any other determinations, empty of objects or other notable physical details, the space of *Quad* is the space that its script suggests. The language of the script is the language of movement, which transforms into the physical space where action is anticipated. The script defines not only the limits, the focal points and the points of reference of a globally-defined square space, but also suggests the rhythm, the pace and the direction of players who ceaselessly traverse a locally-defined quadrilateral surface.[4] Through the construction of the macro, Beckett arrives at the execution of





the synthesis of the square

language transforms into the physical space where action is anticipated

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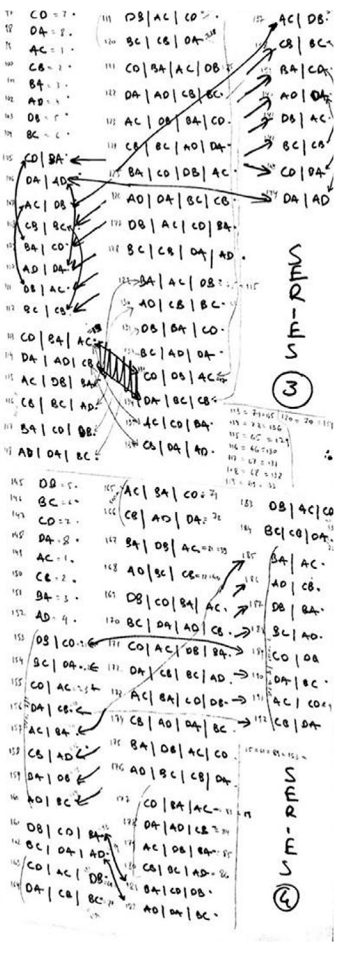
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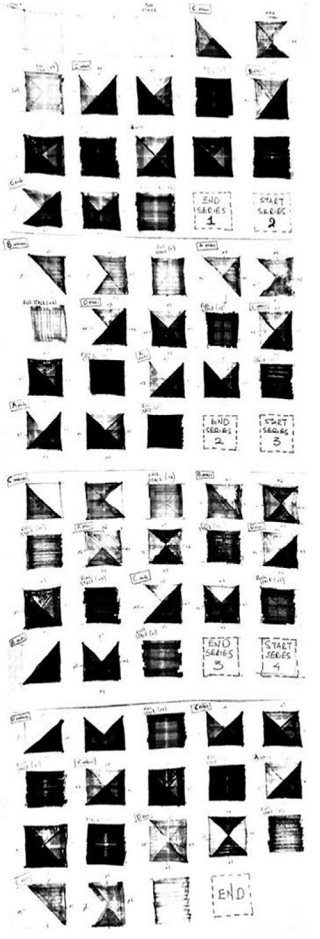
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Fig 3 - Circular Temporality.

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the micro; *Quad* is concerned with the present moment, the construction of an ongoing rhythm, of a site and time-specific space which resides in the relationships between the players within the broader context of the square. Thus, Beckett designs the global—the designated square space—in order to host the relational—the intersubjective exchanges between the four players. In this sense, *Quad* introduces a condition, a situation of body encounters, a circular temporality that allows for the plural while acknowledging the singular.

Quad is a space continually recreated by action and by the formal singularities of the four protagonists on stage. The existence of Quad's space is secured whenever the actors gather together to undertake their common project, and it disappears the moment their activity ceases. Thus, *Quad* is not just dependent upon the singular—the individual existence of each player in isolation—but it is a space entirely tied to plurality. As a spatio-temporal organisation of bodies, *Quad* can only be considered in terms of networks of relations. The four players perform within the condition of their co-existence; their deeds describe this coalescence and their bodies affirm it sometimes in the most dramatic ways—in the curving or the leaning to the front or to the sides as they try to avoid each other.

Beckett wrote a set of simple instructions to be followed by the four protagonists, a set of tasks to be performed. In *Quad* , Beckett designed a series of possible environments to be enacted. Yet, in *Quad*'s delimited space Beckett also proclaims freedom—within the restraints of the square, within *Quad*'s enclosed space, Beckett explores the capacity to begin, the capacity to start anew, the capacity to compose, decompose and recompose. Each time the circle is closed, each time the course of movement is complete, the miracle re-enacts. The four players start again but their actions are unpredictable exactly because they are a manifestation of freedom.

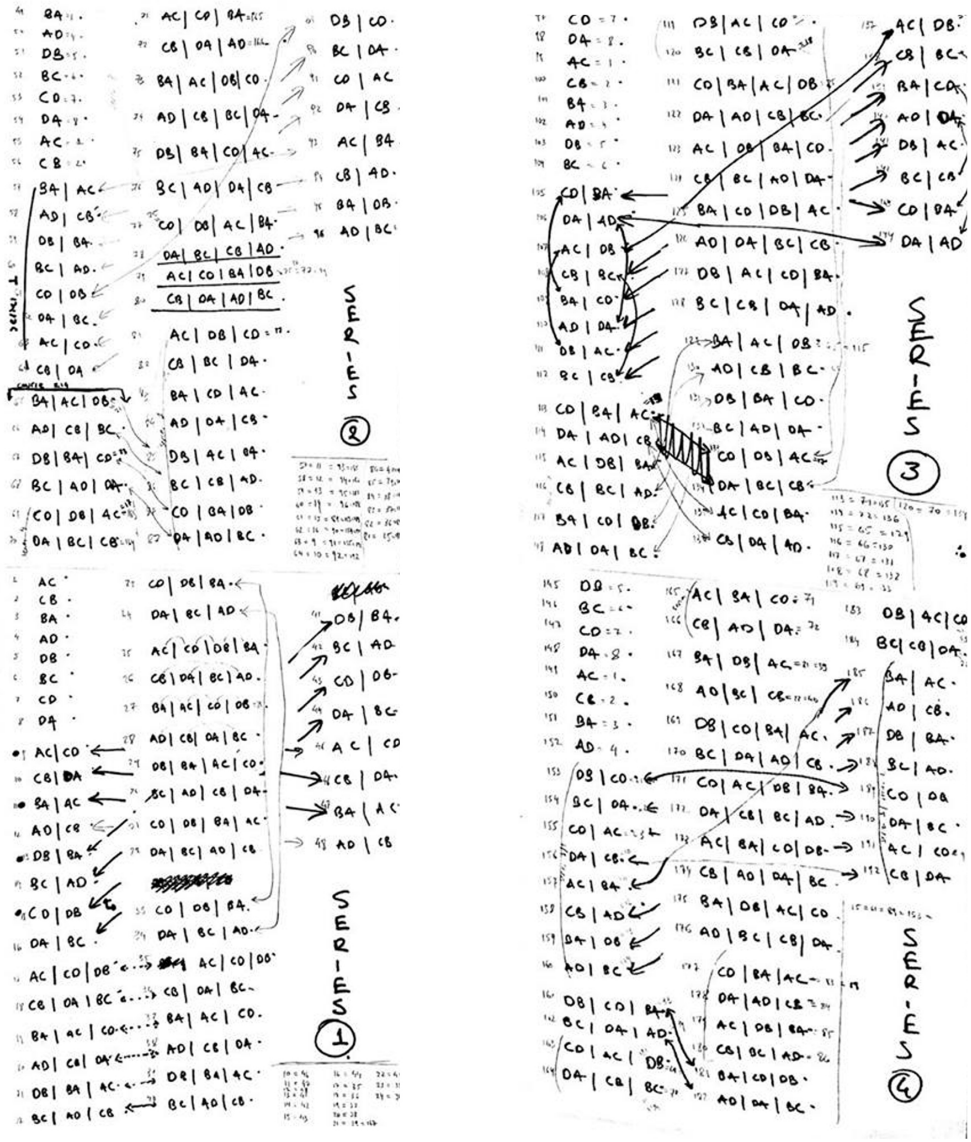
Within the web of relationships that the players construct emerges the potential space of *Quad*.

Fig 4 - Spatial Compositions.

Beckett binds the players to the same rules, to fixed positions and known courses, but even in so doing (or maybe exactly because he does so), he manages to create an active space which is never—and in fact could never be—identical to the one which has just ended, or the one that will follow, or any other one. In the relational space of *Quad*, the outcome can never be predicted; every action becomes a reaction, every deed a source of future deeds, and what, then, remains is the promise of action. The iterative structure that Beckett designs is thus what makes the promise possible, that anticipates potential moments to come.

Beckett's own principal action in *Quad* is to exhaust:[5] to exhaust the players, to exhaust language, to exhaust space. It is by means of exhaustion that Beckett discloses individuality, and allows the players to reveal the "who" that they are, rather than the "what". We could argue, even, that Beckett designs the "what" only to let the "who" prevail upon the performative space. In *Quad's* script, Beckett makes explicit that the four players need to be as alike in build as possible. Their sex is indifferent. Their bodies are covered so that there can be no visual distinction.

However, *Quad* is based as much in equality (in terms of appearance) as it is in distinction. Distinction emerges, and becomes predominant even, as the players inhabit the square, as they constantly traverse its sides and its diagonals, as the fatigue from their unbreakable movement builds up and starts manifesting through their bodies. The disclosure of individuality, the individual voice of the players comes exactly out of this condition of exhaustion; over time the player's knees get weakened and they cannot bear their own weight. The shuffling of their feet becomes, then, the expression of their fatigue. But it is not only that. The shuffling becomes at the same time the affirmation of the players' existence, the manifestation of their action upon the given space. It is this shuffling that takes, in *Quad*, the form of a spatialised language and speaks out for the individuals. It is exactly this shuffling that carries the identity, the personality, and the intentions of each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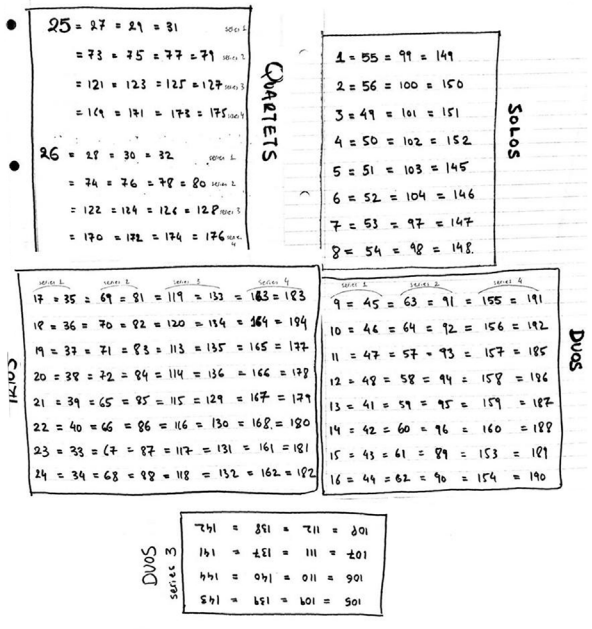
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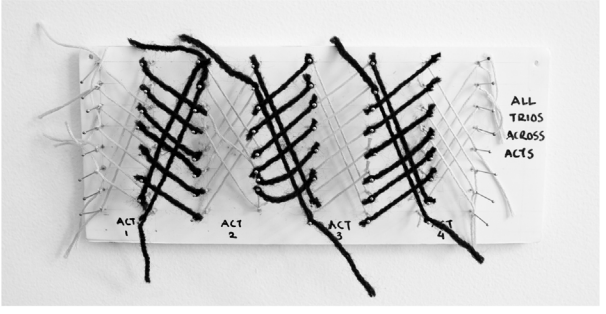
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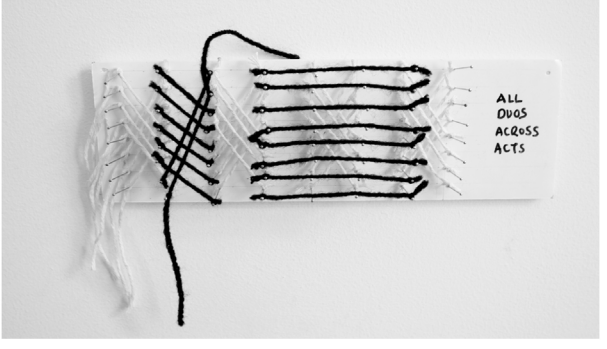
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Fig 5 - Invisible Structures.

player. And it is, moreover, this shuffling that allows for communication among the agents and the actualisation of *Quad*'s potential space. In other words, the shuffling reassures what has been happening, and promises what is yet to come, by establishing bridges among the actors and upon the performative.

Beckett's spatialised language emerges from the algorithmic systems that he has designed, and migrates into the inhabited space of *Quad* —the space of the lived experience. Beckett's spatialised language is the means of interaction; it is what outlines the conditions within the enclosed quadrilateral space, a language that not only speaks but also responds. By exhausting words, Beckett arrives at a pure enactment of the enclosed space of the square, a form of dialogue initiated by the linguistic structures, yet defined by the human action and the disclosure of subjectivity upon them. Thus, much more than a square space, *Quad* can be understood as a field of forces, a dynamic space that is not concerned with the single execution but with the processes that enable multiple narratives to be unravelled.

In *Quad* , language is instrumentalised, so as to break the boundaries of what appears to be 'enclosed'. The inside and the outside of the square, its interior and exterior space are contested. *Quad* transforms into a container of multiplicities that challenge the duality of pre-conceived interiorities and exteriorities, thus enacting an always-becoming space determined only by relational propositions. In other words, *Quad*, as a container, performs by designing the possible, a space yet to come and a future yet to be actualised. *Quad* is the Deleuzian "image", and as such, "it stores up a fantastic potential energy [...] it captures all of the possible so as to make it leap." [6] The square is, thus, not the interior per se ; rather it is the potential of an interior. *Quad* is not language per se ; rather it is the potential of a space that this language suggests.

Although *Quad* is overtly a theatrical setting, this chapter suggests that the synthesis of its 'enclosed space' presents a useful tool for

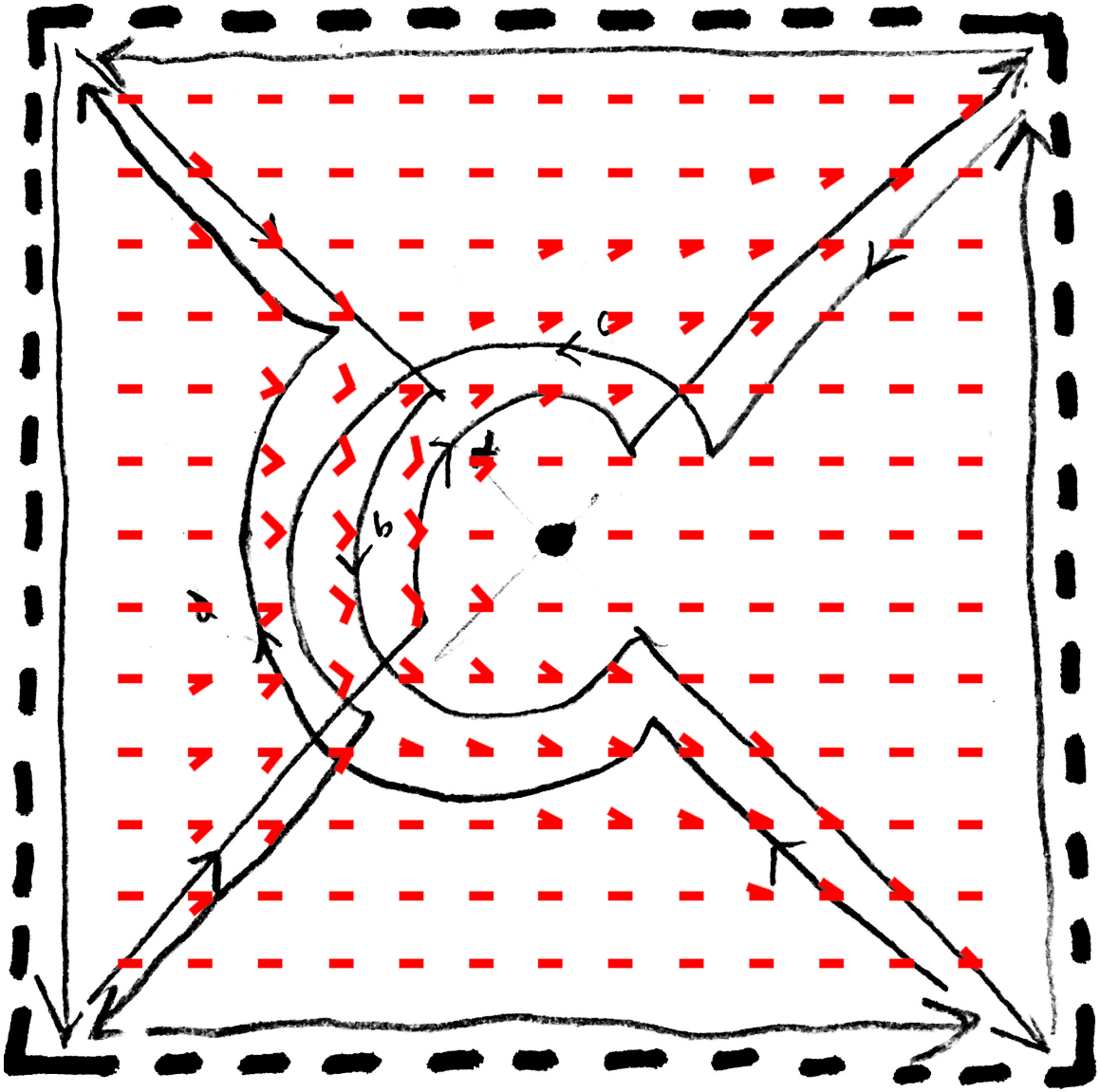
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Fig 6 - Square Mythologies.

thinking about interior futures. From enclosed rooms, in the context of an architectural program (such as rooms with particular functionality or places within the program) to enclosed spaces in the context of the urban environment (such as urban squares), *Quad* serves as an example that challenges the formal systems of spatial production as well as their performance. By developing a methodology of relations and by opposing the idea of single execution, *Quad* opens up a dialogue around space, context and agency, while placing the focus on the processes that enable their interaction.

The provocation of this chapter, then, lies in the understanding of interior futures as open-ended processes rather than delimited and pre-conceived spaces. Put simply, what *Quad* proposes is spaces of interaction where interiors and exteriors are interchangeable in an interplay of relations and narratives.

References

1. Deleuze, G. (tr. Uhlmann), 'The Exhausted', SubStance, 24:3:78 (1995), 3-28 (p.9).

2. Koutla, V. ' Material dialogues: the physical, the digital and the space of possibilities', Royal College of Art (2016), p.54 [MA dissertation].

3. On the compositional capacities of the refrain as a structural unit, and the possibilities of the unravelling of the narrative, Edgar Allan Poe writes: "I resolved to diversify, and so heighten the effect, by adhering in general to the monotone of sound, while I continually varied that of thought: that is to say, I determined to produce continuously novel effects, by the variation of the application of the refrain- the refrain itself remaining for the most part unvaried."In: Edgar Allan Poe, 'On Composition', in Great Short Works of Edgar Allan Poe: poems, tales, criticism (New York: Harper and Row, 1970).

4. In his text 'The Exhausted', G. Deleuze refers to the space of Quad as a "closed, globally-defined, any-space-whatever", a space that belongs to the category of possibility; its potentialities render possible the realization of an event that it is itself possible. For Deleuze, Quad is an indefinite yet determined and populated space.

5. In his text 'The exhausted', G. Deleuze proclaims: "Beckett's text is perfectly clear: it is concerned with exhausting space".

6. Gilles Deleuze and Anthony Uhlmann, 'The Exhausted',SubStance ,24:3:78(1995), 3-28 (p11).

Author Biography

Virna studied Architecture and Architectural Engineering at NTUA and holds an MA in Information Experience Design from the Royal College of Art. She is an active researcher with a particular interest in the materiality and performativity of spaces. Virna's research spans the fields of arts and architecture and she produces work of various scales and types. She recently organized and curated an architectural exhibition in Greece and contributed to various conferences, books and journals. Virna's projects have been awarded and exhibited internationally.

Afterword

Charles A. Matz
Executive Editor, Crucible Press

The hush of evening falls. The tourists have gone. With the lights dimmed, the dazzling beauty of the church is subdued. A few people come in before the evening Mass and whisper among themselves. Along the wall at the end of the left transept, you sit on a long, plain bench, wood mounted on stone. Lean against the cool wall. Touch it. Breathe the silence. Look across the great reach of space toward the high window, where natural light fades. In the mysterious half-darkness, the Madonna Nicopeia looks comfortable in her niche, for she has been at home here for about eight hundred years. Just before the Mass, the lights go on everywhere, blazing on the mosaics and flooding the place with a shower of gold. At a very human level, this is death and rebirth.[1]

Mary Jane Phillips-Matz, writer and historian, describing the interior of the Basilica di San Marco a Venezia.

If interior design should die and we live to see a new craft drawn with more integrity, then the responsible turn is to let the pseudo-profession waste on the pyre.

In the aftermath, unapologetic acts of spatial composition and nuanced assemblies of good rooms can then exhale without contrition. With that release, and with even more of that bravery realized, we, as fully-formed designers, could enjoy the intoxicating strength of the sculpted containers we live for. We could focus on ordering vibrant and treasured artifacts to seduce and sequester our visitors' spirits. We could raise the slant of human experience higher.

In this instance, the chasm between the discipline of design and trade becomes manifest. And the insistence on invented, desultory professional norms, without an explicit, transformative purpose, falls away for a better outcome. Interior designers are trained composers of exquisite experiences within the discipline of design.

They excel when they can focus on hoisting their sails upward with more intuitive diligence; capturing, if fortunate, the fleeting winds of what we may call the inexplicable effect of art. They can be ladders to better vantage points. They can be the catalysts to more than bland, inhospitable assemblies. They can build shimmering works, made to be memorable and atmospheric—standing apart from the quotidian.

Let interior design expire from what it is today and be reborn as an incitement towards new encounters, for the flight of the imagination and celebration of the intellect—most of all, as a worthwhile enterprise at the service of the soul.

Reference

1. Phillips-Matz, M.J. et al., City Secrets: Florence and Venice (New York, US: Fang Duff Kahn Publishers, 2001).