Bodies in Architecture

a thesis by Yekaterina Korotayeva

BODIES IN ARCHITECTURE

by

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Bachelor of Architectural Science, Ryerson University,
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Yekaterina Korotayeva

Abstract

Bodies in Architecture
Master of Architecture, 2020
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Ryerson University

Throughout the history of Western architecture, the human body has been understood as a complete and singular thing. The collection of rules, texts, and theories that today we inherit as the system of architecture has been developed by mining ideal bodies for formal principles. This work is an attempt at engaging with the ongoing processes of redesign of our bodies and moving away from principles of biological determinism. Through the study of four imaginary and partial bodies this work re-frames the conception of a body as a multiplicity. The imaginary bodies, derived from the study of emerging surveillance technologies, social media, sexual desires, and neurological disorders, become the focus of the speculative design project of a home. As an assemblage of environments that only address imaginary dimensions of human condition, this thesis aims to relate to the emerging ways of being human that are often dismissed by established architectural regimes.

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Introduction

“About the body I know very little, though I am steadily trying to improve myself, in the way animals improve themselves by licking” - Renee Gladman, Juice

The idea that architecture can operate exclusively as a monument to embodiment, sheltering the human body and protecting everything human about it, appears to have been extinguished with the decline of the grand narrative of the classical tradition and the emergence of a multiplicity of technologically driven narratives in architecture. The post-structuralist bodies, conceived as social and cultural artifacts, are radically different from the ones found at the centre of the humanist tradition. The emerging bodies are partial, multiplicitous, indeterminate, and deliberately torn into organs, as opposed to the wholesome and clearly defined bodies initially proposed as subjects of architecture in ancient Greece. These bodies no longer aspire to participate in the creation of binary oppositions such as interior and exterior, public and private. Their form escapes the limits of geometric rules, symmetry, and balance. They have relinquished their affinity for unity and strive towards partiality. The list of ambiguous terms and categorizations of the partial and imaginary bodies that today we look to re-inscribe into the image of contemporary architecture goes on. However, the question remains, what do we really know about these bodies? What are their needs and desires? What mechanisms produce them? Are they real or imaginary? Or both? Can we reach them on social media? Is the physical body a prerequisite for their existence? What turns them on? What makes them anxious?

Without facing the specific partial and imaginary bodies that the complexity of social reality today forces us to maintain for different occasions, an architectural inquiry that aims at addressing the multiplicitous bodily condition is bound to face either of the two fallacies. One, it may continue digging through layers of ambiguity and theory that surrounds partial bodies, without ever getting at any specificity. Two, it may recede to exploring the same generic, and uniform design operations that we know were conceived to address coherent biological bodies. At the core of the idea of partiality lies the disavowal of uniformity. Therefore, for architecture to develop specific and non-methodical design approaches that address the partial and imaginary bodies that today

constitute the human experience, it is essential to explore, attempt to grasp and scrutinize the unambiguous bodies rooted in the lived experience.

The following work consists of three parts. The first part focuses on the ideas of real and imaginary bodies and their relationship to space. The second part explores four specific partial and imaginary bodies, attempting to engage with the mechanisms that produce the bodies and ways to address the bodies architecturally. The last part attempts to house the four bodies in a speculative project of a home. Historically, home has been a place of permanence, characterized not only as an assemblage of living spaces, but also a persistent collection of things, objects, and everyday rituals. However, on the other hand, home is a place of impermanence and liberation, as it differentiates itself among other places, public and private, as the one place exempt from strict social and behavioural rules and trends. This coexistence of familiarity and otherworldliness frames home as a territory intrinsic to the exploration of the lived experience of the imaginary human bodies. Within a home the four selected bodies can be explored both through the physical reality of a home as a collection of objects and spaces, as well as the ideological reality of a home as a place committed to prioritizing needs and desires of the bodies above other agendas.

The four bodies explored in this work have presented themselves as part of the research into the ideas of partiality. However, they only speak to a small part of the universe of imaginary and projected bodies that constitute a contemporary human.

Figure 1: Archetypal male bodies in the Western architectural tradition.

Part I - Thoughts on Bodies

Bodies Produce Space - Space Produces Bodies

The question of the relationship between the human body and architecture has underlain the discipline throughout its recorded history ¹. Ever since Vitruvius, at the foundation of the Western architectural thought lies the formal and formalizable status of the surrounding world with the physical body used to establish systems of architectural order. This anthropomorphic practice of extracting geometric and symbolic conventions from idealized male bodies to inform works of architecture has been extensively documented in drawings of Renaissance basilicas, modernist systems of proportions, and postmodernist experiments. The analogous relationship between the discovered “truth in nature” of the physical body and the constructed world has laid the foundation for the emergence of core principles that persist in Western architectural thought. For example, in *De Architectura*, Vitruvius argues that the proportions of the Doric order reflect the ‘strength and grace of the male body’ ², while for Alberti and di Giorgio Martini buildings are genuine metaphors of male bodies. Today, bodies of ideal measure carry through the architectural discourse as they dominate the feminist critique and its interrogations of the faulty sources of masculine power that inform the built world ³, as well as the operations of emerging parametric architecture based on digital analogies of the human body, such as artificial neural networks. Even though contemporary anthropomorphic operations in architecture seem less obvious than the metaphors of the Renaissance, the obsession with measuring and interpreting the body continues to underlie the discourse. Likewise, the binary exchange between body and architecture with the body acting as a source of structuring principles that produce constructed reality largely remains a de-facto interpretation of the relationship between body and space.

[Figure 1: In perpetuating the theory of bodies producing spaces, the reading of the plan of di Giorgio’s Santa Maria delle Grazie reveals a system of modules and proportions that organize the plan and are explained as a translation of a body conceived through a series of random assumptions. The idealized male figure superimposed on top of the plan is assumed to be 5’10” tall with a convenient hip to shoulder ratio that aligns with the span of the transept and is presumably organized along a straight central axis ⁴. This figure is an avatar that represents no specific body; however, it is assumed to represent every body and so does the architecture the figure produces. Similarly, the man in Le Corbusier’s Modulor is

hypothetical. His body is largely based on a 6' tall English male body, chosen over French male and other female bodies as a source of proportional harmony ⁵. However, it remains problematic as the detachment of the Modulor from any specific bodies produces a mathematically sound, yet unproductive framework, in some cases resulting in "designs that are displeasing, badly put together or horrors"⁶. Extending the argument into the early postmodern experiments, John Hejduk's fifteenth masque for his Berlin proposal is also an avatar of masculinity. In contrast to the other two avatars, Hejduk's body is a symbol, rather than an object to be measured. He argues the body's function is to represent the acute need for architectural production appropriate for our time ⁷.]

The 1990s explosion of interest in the body as a socio-cultural artifact problematized analogous relationships between body and space, challenging established design processes that mined physical bodies for formal and compositional principles and then inscribed the "discovered" principles into works of architecture. The perception of ideal avatars was reframed from discovered bodies to constructed bodies, scrutinizing the cultural processes that produce bodies physically, socially, sexually, and discursively ⁸. In her essay *Bodies-Cities*, Elizabeth Grosz overturns the established view of the body as a resource to be mined, arguing that the body produces space as much as space produces the body ⁹. In its raw undefined state, she argues, a human body is malleable and requires social triggering, ordering, and administration to even remotely conform to existing social and cultural archetypes ¹⁰. Architecture is then argued to be instrumental in ordering the body as part of governmental processes that manage life. The relationship between the body and architecture is also reframed to be more complex than the straightforward condition of 'bodies producing spaces'. In *Architecture as Practice of Biopolitical Disobedience*, Paul B. Preciado explores the transition of architecture aimed at producing gendered, sexual, and racial bodies from 19th-century institutional architecture to contemporary soft and less obvious operations. The Foucauldian top-down society, Preciado argues, recognizes institutional space as no longer fulfilling the role of sheltering the body, but rather acting as a form of biopolitical technology that molds the body into the image of 'normality' ¹¹. Spaces such as prisons and hospitals produce bodies through the physical separation of the normal from the pathological while controlling the circulation of fluids and strategic assemblages of organs in an urban environment ¹².

With the emergence of Deleuzian societies of control where governance is dispersed and is implemented through soft systems, the body-producing role of architecture persists; however, this role is less structured. Operating as a prosthesis of the mind, public and institutional space produces the body through the conversion of sex, sexuality, sexual identity, race, and pleasure into objects and systems of symbols used for the political management of life ¹³. Whether through spatial, symbolic or other means, examples of architecture working toward producing bodies in its image, point to the need to rework and productively complicate the relationship between body and space.

[Figure 1: In perpetuating the theory of spaces producing bodies, the reading of the plan of di Giorgio's Santa Maria delle Grazie reveals the plan dictating limits and formal operation of the body. The span of the transept dictates the length of the torso, and from there, all the remaining proportions possible within the rigid spatial constraints of the basilica. The mathematically established proportions of the Modulor determine the location of belly button as a representation of a fraction of the golden section. The rest of the body is determined through further numerical divisions. The resulting length of limbs, torso, and overall height produce an image of an ideal and mathematically correct body. The symbolic operation of Hejduk's masque preserves the avatar of masculinity as an image at the core of the emerging architectural operations 'appropriate for our time'. In reversing the established analogous relationship, it could be argued that the constraints of architectural operations mold and dictate the form of the body.]

Figure 2: Step-by-step production process of the first male sex doll: a - preparation of silicone mixture; b - molding of the silicone into the shape of the body; c - added accessories.

Complete and Partial Bodies

While exploring the problematic mechanisms of bodily production, post-structuralist discourse extensively focuses on criticizing the images of clarity, completeness, and coherence primarily associated with 19th-century institutional architecture. The image of a stable and clearly defined physical body as a comprehensive measure of human experience is solidified as urban institutions enforce spatial gymnastics to codify corporal movements of the population ¹⁴. The abstractions of ideas of organic wholeness in the form of fixed hierarchies and internal functioning logic are deeply embedded into the spatial organization of institutions, such as hospitals, bathhouses, and prisons. In

Biopolitics and the Emergence of Modern Architecture, Sven-Olov Wallenstein correlates the instrumental character of institutional architecture with the formation of knowledge concerned with questions of the hygienic and medical status of the population. The emerging concerns are centered around the way the population mates and under what conditions a normative family unit becomes economically and sexually productive [xv]. These conditions of productivity and pre-antibiotic measures for managing bacterial diseases set off design as a defensive mechanism directly responsible for maintaining archetypes of urban bodies that fall under categories of normality. The fixed internal hierarchy of the 19th-century institutions along with the pre-occupation of architecture with binary oppositions, such as interior and exterior, public and private, are some of many formal body-building tools aimed at subverting the abnormal anatomies of possible physical and social bodies into the images of normalcy. In *Are We Human*, Beatriz Colomina and Mark Wigley argue that in its raw state, the human body is an unstable thing with malleable biological boundaries and an immense potential for modifying its image, functions, and capabilities ¹⁵. While design processes are often introduced as serving the idea of a human, the real aim of design is to reshape a human, ¹⁶ and preserve the image of completeness generally associated with civic - oriented archetypes.

Figure 3: Physical and metaphorical molds.

[Figure 3: The formal and symbolic operation of institutional architecture that participates in the processes of reshaping the human body, and crafting new bodies by ordering clean, pathological, gendered, racial, and sexual subjects evokes the notion of the mass-produced life-sized silicone sex doll as an ultimate experience of design that takes shape through the indeterminacy of a human. The first mass-produced male sex doll speaks to the persistence of archetypes in our society. The colour of the silicone that represents the doll's skin, the shape of the torso and the head in its completeness and symmetry recall the avatars of the Renaissance. Considering the previously established multiplicitous relationship between the body and architecture in di Giorgio's plan of his basilica, it could be argued the sex-doll mold shapes the silicone into the body of the doll as much as the doll itself determines the shape of the mold by proliferating desires for ideal bodies. Conceiving of a complete and determined image of a body is an essential part of the production process of the mold. Similarly, the work that the avatar of an ideal male body does for di Giorgio is essential to the design process of his basilica.]

Figure 4: James Casebere - Landscape with Houses (Dutchess County) No.7, 2010.

The preoccupation of 19th-century institutional architecture with norms and formal operation, aspiring to appeal to the universal archetypes, created the foundation for the emergence of the Modern movement. The newly emerged architectural regime was geared to standardization and to the search for a universal vocabulary that could be applied to our environments at scales ranging from small household items to entire city plans ¹⁷. In addressing the effects of industrialization on cities, the Modern movement further solidified the image of a modern human to eliminate the obsolete, damaged, and traumatized human of the war period by expanding the design regimen beyond the limits of an urban institution to include the private dwelling. In *New Architecture and the Bauhaus*, Walter Gropius primarily focuses on housing, reframing the home as yet another institution, capable of formalizing and producing normative bodies at a more intimate scale than public institutions ever could ¹⁸. The modernist focus on the standardization of the home meant that fixed hierarchies and internal functioning logic based on the preconceived notion of the economically and sexually productive family unit were now formalized in mass-produced houses such as the single-family homes of Levittown

and beyond. The issue of *Assemblage* on House Rules, published in 1994, documents the instrumental role of architectural form in the domestic environment and the production of precise social, gendered and racial models of being human. The essay titled *Queers in (Single-Family) Space* published in the same issue of *Assemblage* by Michael Moon, Eve Kosofsky Sedgwick, Benjamin Gianni, and Scott Weir, became a survival guide for kids and adults who did not conform to normative sex/gender expectations to make territory for their respective selves in-between the defined limits and programs of rooms found in a 'standardized' household. Through creative subversion of existing physical boundaries and the creation of temporary ones, in addition to undermining and reorganizing the rituals that take place inside the home, this guide points to the exclusionary nature of design frameworks aimed at archetypal modes of human existence¹⁹.

[Figure 4: In *The Feminine Mystique*, Betty Friedan interprets the American home as a reservoir complicit in the perpetuation of the archetype of a true housewife. As she deconstructs the home, she notes that the spaces designated for the productive tasks of the upkeep of the house and the family are generally labelled feminine territories ²⁰. The lack of identity and purpose associated with the perpetuation of the image of a true housewife could be further manipulated into dollars at the points of purchase of kitchen appliances and cleaning supplies. This modernist image has further mutated into ideas of modern housewives as access to women's rights, and education improved over time ²¹.]

One universal symptom of crisply defined, complete social, and physical bodies found at the core of reworking the ideas of embodiment in the 1990s was the original dream of wholeness. An affinity for complete images of bodies produced through the fallacious system of knowledge and grounded in human authorship over archetypes mark the operation of both the idealized sex doll body and the image of a true housewife. The doll in its formal operation and the housewife in its symbolic operation are both designations of complete avatars grounded in the original dream of wholeness. In *Simians, Cyborgs, and Women*, Donna Haraway explains the universal coherence of historically justified bodies as a mechanism that allows for the extensive reproduction of bodies, as holistic politics thrive on metaphors of completeness and rebirth ²². Therefore, the proliferation of architecture founded in the image of ideal bodies during the Renaissance period, as well as the modern mass-produced single-family home founded in the im-

Figure 5: Apparition of Bachelor's Body, Diller + Scofidio, Flesh.

Figure 6: Kinney Plywood House, Diller + Scofidio, 1981.

age of a productive family, were successful at propagating their respective stereotypical bodies. The fundamental problem with modeling the built environment in the image of complete bodies is that the complexity of the social reality of any given human being exceeds the grasp of perfect communication of bodily models that promote coherence²³. In other words, while archetypal bodies aim at addressing the needs and desires of everyone, in reality, they address no one.

In opposition to the formalizable entity of a complete body and its exclusionary operations, post-structuralist discourse turned to the idea of partiality. The different emerging outlooks on the body focused on reframing the established premises of biological determinism. Conceiving of the body as a multiplicity and as an autonomous being, not necessarily related to or defined by its histories, the discourse turned to the universe of potentials that populate the body²⁴. In *Flesh: Architectural Probes*, Elizabeth Diller and Ricardo Scofidio arrive at the discussions on partiality in architecture by confronting and further developing the idea of a body without organs. They conceptualize Deleuze and Guattari's theory as a skin, a sock, a house, or part of a house that envelopes the physical body²⁵. Among many interpretations of body without organs they single out a surface as a tool capable of blowing up the physical body with its internal organization and populating the former limits of the body with multiplicities. This condition of a blown-up body separated from its organs presents one with the reality of organs without a body – an aggregation of monstrous autonomous parts that emerged out of coupling flesh and technology²⁶. The critical aspect in conceptualizing organs without a body as parts decoupled from the whole is the potential to approach the subject of inquiry as a partial object in a Deleuzian sense and reject the frameworks that correlate the subject with a coherent whole, a thing or a body²⁷.

[Figure 5: Diller and Scofidio begin their experiments with partiality by literally shattering the physical body of an archetypal bachelor into decoupled body parts. They graduate from organs, to fragments, to multiplicity as the liberated knees, ankles, and even the neck no longer evoke the pre-existing images of a sexually productive male. In fact, without the adjacent parts of the torso and the assumed genitals, the remaining parts can hardly produce a definitive inscription of sex or gender. Through the formal and symbolic celebration of splices, cuts, and partial objects the image of a complete bachelor's body no longer succeeds at re-assembling the decoupled organs into an image.]

Diller and Scofidio discover the productive nature of parts without a body as they get inscribed with instruments of power, become signs, carry images, or get transplanted onto other bodies ²⁸. Operating at the brink of erasure of architectural operations rooted in metaphors and analogous representations, they turn to reason with parts as opposed to reasoning with the whole as means of situating the architectural discourse in the context of a larger theoretical discourse focused on reworking the archetypes of complete bodies.

[Figure 6: In the *Plywood House*, partiality plays a symbolic role, in the sense of parts of the façade gaining aesthetic autonomy from an underlying coherent idea regulating the rest of the surface. As each window operates independently of the internal logic of the building, and the other windows, the project relinquishes the notions of composition and type – conceptions derived from organic theories of complete and coherent bodies ²⁹. The question is whether partiality, in a symbolic or literal sense, can cause a disturbance in the course of architectural design processes that generally start with a vision of a whole (a parti) leading to parts and details?]

As the terms of partiality, partial bodies, grafting, transplanting and re-assembling are being negotiated as credible modes of spatial production, Andrew Holder points out in his essay *Five Points Toward a Queer Architecture* that the call for the decoupling of parts from the whole is not a call for a radical erasure of familiar archetypal body images ³⁰. The idea of a partial body aims to disorient the existing hierarchies, instead of erasing the hierarchies, while blurring the boundaries that define the limits of an organism³¹. As a way of thinking architecture, the partial body could produce spatial conditions without gendered images at its core, with no regard for an origin story in the Western sense, and spatialities that uncouple from the desire for wholeness.

[Figure 7: In relinquishing the normative typologies of complete bodies, an alternative market for sex dolls that creatively operate as partial bodies is emerging under the radar of the 'legitimate' design discourse. The Vajankle is a monstrous assemblage that materialized from the recognition of the agency of a foot as an autonomous body part/toy and lingering desires that exist beyond the minuscule and restrictive territory of the imagination covered by the generic sex dolls.

Figure 7: The Vajankle Sex Doll, Synthetics, 2016.

The organizational model of the Vajankle does not aim to compose, but rather to juxtapose and conceive of a new, yet remotely familiar reality, through grafting and transplanting of the organs relinquished as a result of the unmaking of a complete body. As partiality gets further assimilated as a legitimate design operation, its underlying mission is to put into question the aesthetic conception of the human body as an archetypal figure].

Physical and Imaginary Bodies

Sensing the limitations of theories of embodiment centered around physical bodies, postmodernist thinkers, from Donna Haraway to Gilles Deleuze, turn to imaginary dimensions of human experience. Filled with potential traits, connections, and affects, postmodern theories explain the body as a multiplicitous phenomenon reflective of the complexity of our social reality. For example, the abstract theories of cyborg bodies and bodies without organs developed from the struggle against ‘perfect communication’, challenge an array of dualisms running through the Western philosophical and political tradition. Operating as socio-cultural artifacts, the abstract bodies question binary conceptions such as physical / non-physical, body / mind, public / private, nature / culture, male / female, and interior / exterior ³². Through the means of technologically enhanced bodily and creative liberation, the image of a cyborg body confronts established dualisms as it operates the territory of fragmentary identities, trans-bodies, and the in-between ³³. The abstract idea of a collapse of an organism and a machine for Haraway is committed to the erasure of clear boundaries interpreted as an inherent effect of understanding a body as a coherent organic unity. Without appealing to the images of the literal cyborgs, the transplants and grafts of hardware to physical bodies in a fictional sense, suggest technology as a conceptual tool to confuse the definitive characterization of bodies.

[Figure 8: Body images that do resist categorization can have a real impact on the design processes and finished products, starting with decoupling from gendered ideologies. As images of bodies are inevitably inscribed onto the designed objects, the question of ‘what image of what body?’ charts the ideological territory of the design inquiry. Theories such as the cyborg body, when used creatively, have potential to disorient the established coherent archetypes in favour of obscure images. With the creative space freed-up from the concerns of biological determinism, the necessary breathing room can be created for more productive operations.]

Beyond the multitude of screws, plates, nails, wires, pieces of metal, and plastic that we are so used to populating our bodies, contemporary external prosthetics keep expanding from familiar analog replacements of limbs to electromagnetic devices and neuroprosthetics directly connected to our brains ³⁴. The assimilation of temporal prosthetics, such as devices that connect us to cyberspace, further speaks to the vastness of

the emerging landscape of disembodied ways of being human as technology redesigns the body, detailing attention to digital experiences. Within the architectural discourse, the emergence of this technologically enhanced imaginary dimension of a human body presents a challenge to produce environments not just for the physical body, but for the bodies projected outside themselves with their senses hugely expanded beyond the limits of the skin. By incorporating technology into the body, we can conceive of a different kind of body, a projected body, re-designing the organism's corporal senses and abilities³⁵.

Figure 8: Different approaches to the design of leg prosthetics.

Another theory that pushes the understanding of a human body beyond the limits of the organism into an imaginary dimension is the idea of a body without organs. In *Anti-Oedipus; Capitalism and Schizophrenia*, Deleuze recognizes the limits of the physical body when it comes to movements and effect, and instead focuses a projected dimension outside of the organism filled with potential traits and connections ³⁶. The body without organs is a sophisticated practice with many possible interpretations. Its fragmentary and fluid nature prevents one from constructing a singular reading, which appears to be the point of Deleuze's thought. In one of the interpretations of body without organs in the context of an architectural inquiry, Georges Teyssot focuses on the notion of Deleuze's body that does not hinge on the singularity of each organ and the internal obsession with hierarchies of an organism ³⁷. Instead, the body without organs operates in its exteriority and its effects on other bodies, perceived through relations and desires³⁸. An example of a body defined through a system of external relations in contrast to an organism characterized by its interiority, can be found in Bataille's dictionary. In *Formless: A User's Guide*, Yve-Alain Bois uses Bataille's dictionary as an example of one of the early post-structuralist attempts at sabotaging established modernist art regimes. Bataille's dictionary faces highly organized and structured body of a conventional dictionary and reorganizes its operations by decoupling from hierarchical organizational models and notions of terms having set and coherent definitions. The body of the new disorganized dictionary randomly scattered across multiple issues of *Documents* magazine and edited by Bataille, prioritizes terms defined through incidental systems of external relations, rather than term's histories and etymological context. For example, to undermine the archetypal definition of the term *man* found in conventional dictionaries, Bataille collected definitions willing to forgo the archetypal presumptions. The first definition of a man from an anonymous source provided a precise manner of what the man's body is made up of and what its chemical value is (the actual values are unknown)³⁹. The second entry from a fanatical vegetarian Sir William Earnshaw Cooper defined the body as the 'blood guilt of Christendom', conceived of by adding up the daily massacre of animals on which it feeds (the actual values are also unknown) ⁴⁰. The productive sentiment of the vegetarian's entry is the transformation of one's lived body into an intensive body that, unlike the first entry, is no longer defined by its physical organization and its internal composition but rather by its relation to a multitude of other bodies that it happens to

consume. To expand this argument, the lived experience of a body defined by its external relations would demand imagining a multiplicity of projected bodies for different occasions, as the complexity of our cultural life and social reality demands ⁴¹. The imaginary bodies we construct at work, at home, in public and in private, as well as a new body for each social media setting, are all modulated by the bodies' cultural externalities. Therefore, to reinforce the theory of partiality of our bodies, it could be argued that considering the extent of projected bodies we maintain, at no point can the full extent of a human body be described as a coherent whole. Instead, conceiving of a body as a place of difference populated by multiplicities of imaginary bodies, as opposed to a singular organism, could lead to a broader and more inclusive perspective on the lived human experience .

[Figure 9: In *Beyond Wearables: The Future is Fleshy*, Lucy McRae draws a diagram delineating the ideological territory of design with the projected body layer situated between the limit of the skin and the surrounding space ⁴². The editing life territory is described as full of social and cultural externalities modulating projected bodies. The cross-section capturing the territory of the skin, the multiplicity of the projected bodies and the architectural space is precisely the territory this work will attempt to operate in.]

Figure 9: Body and space diagram - Lucy McRae, *Beyond Wearables: The Future is Fleshy*

Notes

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- 3 Holder A. (2017) 'Five Points Towards a Queer Architecture Or Notes on Mario Banana No 1'. *Log*, (41), 155-160.
- 4 Millon, H. (1958). 'The Architectural Theory of Francesco di Giorgio'. *The Art Bulletin*, 40(3), 257-261
- 5 Corbusier, L. (1961). *Modulor: A harmonious measure to the human scale and universally applicable to architecture and mechanics* (2nd ed.). Faber and Faber, 60-61.
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- 21 Ibid.
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23 Ibid.

24 Diller, E., Scofidio, R., Teyssot, G., & Diller + Scofidio (1994) *Flesh: Architectural Probes*, 34-35.

25 Ibid, 38-39.

26 Ibid., 33-34.

27 Žižek, S. (2004). *Organs Without Bodies: Deleuze and Consequences*. Routledge.

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Part II - The Design Research Experiments

Partial and Imaginary Bodies as a Starting Point for Design

Before design, there is never a clear line between the inside and the outside of the human body ⁴³. In *Are We Human?*, Colomina and Wigley argue that contemporary human beings are cultural artifacts and products of design protocols and technologies. In its pre-designed state, the human body is unstable and malleable as the condition of our stripped corporeality is that we are not clearly defined biological organisms with a set of characteristics and capacities ⁴⁴. We develop these definitions, adapt, and modify our capabilities in a complex process of feedback relations with our constructed environments, systems for managing life, and other bodies. Through interaction with design in the form of tools, objects, cultural rituals, buildings, and urban environments, the undefined human body is citified and urbanized as a distinctively metropolitan thing ⁴⁵. As previously discussed, in this mutually defining relation, while spaces produce bodies and bodies produce spaces, the built environment provides context and coordinates for contemporary archetypal bodies. The expected behaviours, needs, and desires of bodies subordinate to the effects of design, if reproduced at a large enough scale, can be formalized into images of normality, that coherent terms communicate the circumstances of being human at a point in time. Thus, the image of a modern human as a product of health and sanitation related paranoia was re-inscribed into the image of all-white buildings elevated over the humid and unhygienic ground and was further perpetrated on a mass scale by the modern movement ⁴⁶. Similarly, the image of a millennial human that has become one with their laptop and now enjoys working from bed is being re-inscribed into the conceptions of “horizontal architecture” presented at the 2018 Venice Architecture Biennale ⁴⁷.

In questioning “Who do we design for?” it is quite common for the architectural discourse to turn to the avatars that, in their completeness, aim to describe everyone but describe no one. The bodies that we aspire to address in spatial design have already been processed, regulated, and reconstructed from the raw, incomplete, and amorphous series of uncoordinated potentials into the crisply defined products of design – the archetypes ⁴⁸. The eagerness to adopt and promote defined and complete bodies is arguably at the core of the current crisis of body to architecture relationship that we are living through. For architecture to catch up with the rapid ongoing redesign of the human body would mean to not only relinquish the affinity for archetypes but to problematize the Cartesian understanding of bodies as defined and finished things. Building on the

research into the partial nature of corporal and social experiences, as well as the indispensable role of the imaginary dimension of our bodies, this work attempts to argue that the image of a singular and complete body proliferated by the architectural discipline is a fantasy.⁴⁹ As a starting point for the design-research project, in lieu of embracing any of the existing pre-assembled notions of the contemporary human bodies, this work suggests tapping into the indeterminate, partial and imaginary conditions. In reading bodies as multiplicitous phenomena, the ambition is to put into question the fallacious principles and oppositions intrinsic to a design project that starts with a complete, idealized, and sanitized image of a body, such as the adherence to the rules of harmony, balance, proportion, and the delineation of interior and exterior, public and private⁵⁰. The design process that starts with examining the multiplicity of projected bodies of the user, rather than accommodating their singular biological body, is no longer focused on discovering the hidden truth in ‘nature’, but the necessity to specify and examine the cultural, political and technological processes through which bodies as architectural artifacts acquire their status⁵¹. In considering the possible anatomies of contemporary bodies, four areas of focus begin to emerge, each representing a fragment of the universe of the imaginable representations of the human experience:

The Detected Body

The Social Media Body

The Sex Doll Body

The Anxious Body

The possible anatomies of the four bodies and their relationships to space and the physical human body become the focus of the following design-research experiments.

Born out of the affinity for technologically enhanced approaches to sensing and surveying the surrounding world, the *Detected Body* is an experiment in representing and spatializing the ways in which technology can sense and modulate us. The instrumental nature of the Detected Body presents an opportunity to reconsider the spatial body-producing mechanisms in our society that have evolved from the familiar “molds” proliferated by the 19th-century institutional architecture into algorithmically driven soft systems for modulating life. As technology senses us, it constructs images of bodies

with radically unfamiliar traits and effects that call for the redesign of the spatial frameworks aimed at exclusively addressing the traits and effects of our physical bodies.

The *Social Media Body* is an exploration of the social media landscape that emerges as a result of the proliferation of copies and reproductions of ideas online. As a partial and de-corporealized being, the alliance that the Social Media Body creates with the ideas of partiality is full of potential for spatial responses aimed at crafting multiplicitous and unique realities. Seen as a creatively productive disembodied condition, the decentralized governance of the social media landscape contributes to the processes that shatter preconceived narratives in our society and advocate for design frameworks that move away from the desires for unity and coherence.

The *Sex Doll Body* emerged out of an affinity for the ideas on transplanting and grafting of organs into new bodies as ways of reworking the established archetypal images. The possibility of editing the doll's body from the infinite pool of organs becomes a celebration of divisions, splices, cuts, and partial objects and a space-making methodology. The body of the doll operates as a punctum of identity and yet another avatar. However, the constant remaking of the doll following the unfiltered and evolving wants and desires of the doll's owner, make it an avatar of difference, as opposed to an avatar of sameness.

The *Anxious Body* is a reaction to the emerging signature afflictions of our age. The discovery of antibiotics has put an end to the age of bacterial diseases and the inherent sanitation-related paranoia. Our age has brought into light the extent of neurological conditions, such as depression, personality, and anxiety disorders, as forms of self-realization. The growing demand for physical comfort and smooth experiences is symptomatic of this shift. While the design processes in clothing and tech industries have rapidly adapted to the proliferation of the Anxious Body, the slow-moving discipline of architecture has yet to do so.

In practice, the *Detected Body* is sensed and mapped remotely, using machine vision. The remote sensing is a product of the emerging soft systems that police and optimize the urban environment while collecting data through sensors and feeding the data for analysis into algorithms. In a city where life is modulated through computation, the physical human body is no longer the dominant subject through which the city is designed and understood. Instead, the body, like the rest of the urban environment, is perceived through technologically enhanced frameworks, including autonomous cars, drones, and machine vision surveillance⁵². Embedded within the urban megastructure of a city among the layers of minerals, water, metal, organisms, and urban scale networks, the autonomous remote sensing software and hardware are changing the conceptual armature of governance. From the 19th-century top-down approach focused on producing bodies of citizens in accordance with established molds to more dispersed forms of control, technology is playing a central role in defining the new modes of urban sovereignty⁵³. In *Postscript on the Societies of Control*, Deleuze anticipates the dispersal of a singular coherent governing structure in favour of newly emerging forms of control powered by technology. The transformation he describes starts with outdated Foucault's disciplinary mode that coerced bodies into governable envelopes, such as schools, prisons, and families, to a society where the individual body is sensed and further modulated, relying on algorithms and the incoming streams of data⁵⁴. Deleuze further argues that the types of machines that perform the modulation and participate in the collective processes of managing life, are easily matched with the type of society they get integrated into, not because the machines define the society, but because they can express and generate social forms⁵⁵. Hence, the disciplinary society used analog machines equipped with levers, pulleys, and clocks, while newly emerged societies of control use machines that are pure energy. This transformation of soft and hard systems disturbed the world's arrangement to a degree that we continue to struggle to comprehend and design for. The clearly defined tasks of physically separating and ordering bodies that architecture of the past century could process and respond to, are no longer in demand. The funda-

Figure 10: Snapshot of the machine vision reality from an autonomous car.

mental tectonic and physical focus of architecture is the source of its struggle to find ways to plug the constructed spaces and the physical body occupying the spaces into the interface of the soft envelopes that govern the world today. The growing realization that the established design frameworks rooted in the original dreams of unity and completeness cannot account for the layers of social complexity, brought on by the emergence of global-scale computation, has the potential to shift the focus of the discourse. Starting with the examination of emerging bodies produced by the high-tech facilitated sensory systems, such as the Detected Body, could be one of many points of entry into logistical modernity.

Figure 11: Stills from a video showing the mappings of physical bodies and objects produced with a lidar scanner.

Figure 12: Experiments with using lidar mappings of real objects to create imaginary environments.

Figure 13: Attempting to draw boundaries of objects within the point cloud.

One of the technologies that enable the proliferation of autonomous urban-scale surveillance is machine sensing and specifically the machine vision in cars, drones, and surveillance cameras, such as *lidar*. Lidar vision at its core, is an advanced form of short-range radar that maps the environment around its sensors, estimating the geometry and location of objects in space. The creatively productive feature of this technology is that despite the high degree of precision of the point clouds it produces, the algorithm that analyzes the maps has no way of assigning meaning to forms or establishing a system of hierarchy among them ⁵⁶.

[Figure 11: For example, the mappings of a range of physical bodies produced using a lidar sensor can be identified as human bodies. However, based exclusively on the point cloud provided, current algorithms have no clear way of assigning meaning to the forms except for identifying their approximate size and proximity.]

The point cloud produced by the lidar vision in a way behaves like a lamella described by Jacques Lacan – a shifting blob deprived of the symbolic order, a form of matter that cannot be stopped, but can only reproduce and split ⁵⁷. The current lack of software able to assign symbolic order to forms mapped through lidar creates a distinct world inside the computer of a self-driving car that is devoid of hierarchies and biases towards animate and inanimate objects. Found within the lamella-like cloud of points, the technology may sense a car tire, a garbage bag, or a human standing on the street. Unable to prioritize or understand the nature of any of the three objects, the car's reaction to all three will be the same – to avoid the objects.

[Figures 12-13: When mapping environments in their entirety into clouds, the assumed boundaries of bodies and objects contained within the environments become less defined. This theoretical condition of breached boundaries that

Figure 14: Stills from a video showing lidar mappings of a body among birch tree forest and a forest of metal columns.

Colomina and Wigley refer to as “the raw state of a human body” before the construction of fallacious oppositions, that define the interior and exterior of our bodies ⁵⁸, is visualized in mappings of bodies detected by lidar. The visualizations of the Detected Body become conceptual tools for imagining environments with fuzzy borders and lack of hierarchies.]

In his article, *Another Matter: Notes on Worldeating*, Benjamin Bratton argues that in a way lidar vision technology operates as Deleuze’s body without organs, as lidar is incapable of differentiating between living and nonliving, animate and inanimate, sees the world as a pure spatial inorganic continuum ⁵⁹. When mapping the environment, the machine vision quite literally cannot penetrate beneath the skin of the physical body. Therefore, the representations of the detected bodies have no concern for the internal organization of mapped forms, only considering their exteriority and their relationship to other bodies.

[Figure 14: The comparison of the two mappings of a physical body among a birch tree forest and a forest of metal columns makes it challenging to differentiate between the ‘natural’ and the human-made context. In addressing the vulnerability

Figure 15: Lidar used as a drawing tool to generate imaginary environments, blurring the line between exterior and interior spaces.

of theories that operate in binary terms, the discourse often turns to expand the binary terms to challenge the duality with complexity. In contrast, the productive nature of the stripped-down corporeality of the point cloud representations in a manner simplifies the binary terms to a degree where it becomes difficult to establish the line between the 'opposing' conditions. One of the consequences of this deliberate erasure of the symbolic order is the consequent emergence of alternative frameworks that deal with relations between bodies beyond the constructed binary conditions.]

Within the environments represented through the machine vision technology, it becomes quite challenging to draw the line between public and private, interior and exterior spaces, as the lamella cloud morphs. It detects objects and bodies in their exteriority, not boundaries in their interiority. Using lidar vision as a drawing tool, the three-dimensional collages attempt to tap into this condition of the body without organs as a creative mechanism. Imagining environments populated by a variety of detected bodies, with no regard for their definitive characterization, becomes an exercise in devising organizational schemes that do not rely on symbolic order as a reference point.

[Figures 15-16: This imaginary environment is an amalgamation of physical bodies, machines, concrete, plants, and technology mapped randomly from across the urban environment. As the mapped objects collide into the imaginary continuum, their histories dissolve in favour of the newly emerged spatial relations.]

[Figure 17: The imaginary domestic space is a collection of mapped objects, usually found in a bedroom. The extent of the physical bodies is mapped with a sound-based application. As the bodies move and turn, they dissolve into and emerge from the fabric of the bedding, while the adjacent surfaces become spatial mediators, enhancing the detection process.]

Figure 16: Stills from a video showing a fly through of an imaginary structure collaged out of 3D mappings of urban environments.

Bodies in Architecture

Figure 17: Stills from a video showing the lidar mapping of bodies inside a bedroom.

The Social Media Body

One of the symptoms of the transition from Foucault's disciplinary societal order to Deleuze's societies of control is the declining role of physical governable envelopes as instruments for the management of life ⁶¹. The spatial regimes of institutional architecture that were tasked with coercing citizens into urban conditions and promoting top-down ideologies from street hygienics to women's confinement are now losing their instrumental role to digital infrastructures. In *The Stack*, Benjamin Bratton describes this transition as a shift from the familiar 'hard' architectural envelopes to 'soft' digital envelopes ⁶². The urban dwellers face examples and experience impacts of the soft digital envelopes daily. As we move through filtering gateways, points of purchase, identity verifications, and geographies of personalized advertising and entertainment, we participate in the pre-programmed and algorithmically driven collective modulation of our behaviours ⁶³. In January of 2020, a Berlin-based artist Simon Weckert attempted to modulate driving patterns across the city as he dragged a cart filled with ninety-nine

Figure 18: Social media mapping of Imprint project by MVRDV and the source code used to generate the mapping.

phones along the empty streets relying on Google Maps to interpret the aggregated data from the phones as traffic jams ⁶⁴. He was able to redirect drivers away from the empty streets without deploying physical interventions as most people surrender their decision making when charting a route through the city to software, rather than relying on observations of the physical context. Weckert's experiment is an accurate representation of the friction that Bratton argues emerges between 'hard' architectural environments and 'soft' urban-scale networks where the conditions of the physical reality do not align with the suspiciously responsive environments of the digital landscape ⁶⁵.

Characterized by the extreme responsiveness and dispersal of authority into multiplicitous fields of interface, the soft envelopes do not only contribute to the decline of the instrumental role of the architectural envelopes but can deny top-down governmental structures their ability to promote uniform and structured narratives in the society. When digital infrastructures and social media operate freely, decoupled from governmental filtering and other modes of top-down control, the resulting digital landscape becomes a territory where participants with the capacity to plug in can craft their unique realities. However, the realities remain limited by the pre-programmed interfaces and frames of thought. As digital envelopes continue to permeate every aspect of our lives, the embodiments of interfaces at threshold between hard and soft envelopes gain agency and identity as independent forms of human experience. The necessary condition of plugging into the digital landscape is a creation of an avatar, which could be a collection of information about the user, such as the username, email, and password, or a much more complex form of identity that operates independently from the physical body. Projected outside of our physical bodies, the social media avatars have evolved into insidious forms of being human that take advantage of the dispersed forms of governance across the digital landscape. The crisply defined and normalized image of a modern human was inscribed into the image of the modern envelope in their mutually defining relation. In contrast, the image of a social media avatar is produced by rapidly changing trends and forces beyond the reach of the slow-moving physical reality. Our *Social Media Bodies* are unrestricted by the biological confines of our physical bodies. While the physical body in its integrity remains an amalgamation of matter of which only 10% is human, and the rest is interspecies of microbes and fluids⁶⁶, the constitution of the Social Media body is partial and can fluctuate from being 24% memes, 10% social

media and 66% YouTube Videos to 100% saturation with cat gifs ⁶⁷. In its partiality, the operations through which the Social Media Body participates in the production of the digital landscape differ from the familiar and seemingly more coherent design processes through which we construct physical reality.

[Figure 18: The mapping of MVRDV's project Imprint is an amalgamation of over a hundred photographs of the building posted on social media and traced through the hashtag #imprint. After aligning the photographs based on the shared features, the portrait of the building collectively composed by the participating Social Media Bodies is revealed. Despite the complex formal and tectonic narratives that produce the physical building, the aggregate image highlights a single point of interest in the project, discarding the rest of the building into the fuzzy background.]

As a partial and de-corporealized being, the alliance that the Social Media Body creates with ideas of partiality is full of potential for spatial responses aimed at crafting multiplicitous and unique realities. This work's interest in the projected Social Media Body and its relationship to soft and hard envelopes stems from its unique capacity to augment and define its image and its digital context to its liking. As an emerging form of dispersed governance and urban sovereignty, the digital landscape is produced by the collective intelligence of Social Media Bodies as they continuously reproduce works of architecture in the form of experiences documented on social media. To generate a model reflective of the aggregated image of the digital landscape collectively produced by the users, this work followed the logic found in face averaging applications that generate an average image of a human face by aligning a number of images based on features with varying opacities. The resulting mappings contain hundreds of photos contributed by social media bodies, each adding a unique perspective and describing a personal experience of the work of architecture.

[Figures 19-22: The mappings were produced using an open-source algorithm that identifies common features in images and layers them on top of each other. Some mappings get focused on a feature or an object, editing the intended architectural narrative and propagating one collectively selected view and experience. Other mappings resist being reduced to a feature, reproducing works of architecture in their entirety.]

Figure 19: Social media mapping of Ragnarock project by MVRDV.

Figure 20: Social media mapping of Zeitz MOCAA project by Heatherwick Studio.

Figure 21: Social media mapping of Ronchamp Chapel project by Le Corbusier.

Figure 22: Social media mapping of Fondazione Prada project by OMA.

The operation of each mapping of the digital landscape is analogous to the Otaku anime phenomenon that Hiroki Azuma describes in *Otaku: Japan's Database Animals*. Otaku is characterized by the propagation of reproductions of decorative works of art, resembling, but not necessarily related to the original⁶⁸. The public access to the simulacra of anime, Azuma argues, has contributed to the collapse of a grand social narrative structure in the society by creating several small and less uniform narratives that consumers could access through dispersed channels, as opposed to one governable channel⁶⁹. Similarly, dispersed authority over the social media landscape opens the possibility of endless process of reproduction of works of architecture with each reproduction presenting in a uniquely different way. The architectural intent and boundaries of real objects collapse as the grand architectural narrative, in a literal sense, becomes visibly fuzzy in the mapping. Following the logic of the Otaku that contributes to the emergence of an alternate mode of social engagement, the Social Media Body becomes an alternate mode of engaging with the urban landscape that re-constructs reality as a democratic and multiplicitous phenomenon. To further interpret the social media mappings and realize the collected images into a form of a landscape, this work takes its inspiration from Piranesi, an interpreter of ancient Roman

Figure 23: Social media mapping of works of architecture that resist simplification.

Figure 24: Two approaches to making copies of objects.

ruins⁷⁰. In his creatively exaggerated interpretations of real fragments of ruins, Piranesi collected images and assembled them into imaginary landscapes that, in his opinion, communicated the overall effect of the discovered architectural forms ⁷¹.

[Figure 28: The drawing of Old Appia Antica and Via Ardeating shows a fictional landscape populated with copies of Roman architectural fragments filtered through Piranesi's imagination. The process of collecting and intensifying objects that Piranesi goes through to create this imaginary landscape is not radically different from the process of populating an Instagram feed with collections of deliberately selected and processed images. The goal of both operations is to set an ideal formal and aesthetic context for a body. In Piranesi's case, the body is the Roman empire, while in the case of an Instagram landscape, the body is an imaginary avatar.]

Following Piranesi's methodology, a fictional landscape, randomly retrieved from an online warehouse, is populated with copies of the architectural fragments generated by the collective intelligence of the Social Media Bodies whose photos participated in the creation of the social media mappings.

Bodies in Architecture

step 1 - collection
of objects

step 2 - random
distribution of
objects

step 3 - populating
the landscape

[Figure 24: The two ways of generating copies of the architectural fragments follow the principles described by Azuma in Otaku. The first principle (see top row) produces a multiplicity of objects formally related to the original mapping, but all marginally different. The second method (see bottom row) operates according to the principles of simulacra, as the reproduced copies follow the same formal rules as the original object but are distinctly different.]

Figure 25: (left) Step-by-step assemblage of the digital landscape.

Figure 26: (bottom) View of the assembled digital landscape.

Figure 27: Social media digital landscape.

Figure 28: Via Appia and Ardeatina, Giovanni Battista Piranesi, 1743.

[Figures 25-27: The resulting fictional landscape is populated with objects produced by the Social Media Bodies and copies of the objects, interpreted and intensified for this experiment. Within the degree of randomness achievable among the constraints of parametric software, the resulting image of the digital landscape is devoid of organizational principles concerned with balance, composition, and proportions. Instead, the landscape emerges from a place of difference and a collective mode of random reproductions of works of architecture.]

However, in aiming to resist the creative processes that rely on preconceived narratives, the process that produces the digital landscape still relies on its author to interpret the social media mappings into the architectural fragments and to produce copies of the fragments to populate the landscape. Similarly, the fragments that populate Piranesi's imaginary landscape rely on him as an interpreter, to a degree standardizing the fragments. To remove the interpreter from the process of converting the two-dimensional mappings into three-dimensional objects, the mappings were fed into a landscape reconstruction software used in drone surveillance.

[Figures 30-33: Reconstructed from the hundreds of images produced by the Social Media Bodies, the resulting object-landscapes represent 'best guesses' of an algorithm as to what the collected architectural fragments may look like. The more information is fed into the algorithm, the closer the objects get to resembling the original.]

The productive nature of the experiments with digital landscapes and images collectively produced by the Social Media Bodies lies in exploring design processes that prioritize difference and partiality, aiming to resist the sterility of environments designed through top-down approaches. As the organic wholeness of the physical body fades in the operations of the Social Media Body that is defined by an ever-changing multiplicity of external influences, the definitive border between the physical and digital also starts to fade. The new realities of bodies that are part physical and part digital will require new practical and conceptual design armatures that account for the emerging layers of complexity.

Figure 29: Examples of raw outputs of object-landscapes.

mapping + 1 image fed into the algorithm

mapping + 10 images fed into the algorithm

the actual object fed into the algorithm

Figure 30: (top previous page)
Transformation of a complete object into
an object-landscape.

Figure 31: (bottom previous page)
Object-landscapes with varying degree of
precision.

Figure 32: (this page) Hybrids between
actual objects and object-landscapes.

vol.1 object-landscape

vol.2 object-landscape

Figure 33: In-between states of object-landscapes.

the in-between object-landscapes

the in-between object-landscapes

vol.3 object-landscape

The Sex Doll Body

Quoting Dr. Lovell, a naturopath and a drugless practitioner, Colomina and Wigley dream of a revolution in the relationship between body and architecture when we will “find a way to construct our bodies with the same precision and accuracy as the modern architects designed their houses” ⁷². In promoting the image of an ideal physical body through vegetarian diet and exercise, Lovell’s work became the origin of the modernist affinity for bodies of ideal measure in Southern California and beyond. Lovell’s house, known as ‘Health House’, designed by Richard Neutra, is a prime example of modern architecture working toward producing archetypal physical bodies, as balconies built for nude bathing, outdoor gym, windows with no UV filters, and kitchen designed for a strict vegetarian diet, operate as high precision molds that produce ‘healthy’ bodies. Today, Lovell’s dreams of ideal bodies are being realized inside the life-sized sex doll manufacturing facilities as flawlessly manufactured bodies molded from silicone indistinguishable from human skin, and body parts meticulously designed to reflect the trending standards of beauty, are manufactured at exponential rates.

[Figure 34: The 2016 Vice documentary on the emergence of the first male sex doll reveals the increasing demand for silicone dolls among people from conservative communities, those dealing with loneliness and isolation, as well as long-distance relationships ⁷³.]

Figure 34: Physical body and the sex doll body together, Making The World’s First Male Sex Doll | Slutever Documentary, 2016.

Figure 35: Sex doll body manipulations.

The design processes that deal with manufacturing off-the-rack versions of uniform sex dolls, at their core, do not only recall the modernist affinity for the production of idealized bodies, but go as far as recalling the fallacious body images preoccupied with symmetry, balance, and proportion, identical to images initially introduced in ancient Greece ⁷⁴. The abstract molds in the forms of public and domestic institutions that used to produce modern bodies, have now become literal molds that produce complete gendered, sexual, and racial silicone dolls, perpetuating archetypal body imagery from within our bedrooms. However, an emerging alternative mode of designing editable silicone dolls, that are more responsive to legitimate desires and fantasies, transcend constructed ideal images and disturb the uniform sex doll market.

[Figures 35-36: Brought about by the proliferation of online privacy and customizable manufacturing techniques, the alternative sex doll bodies⁷⁵ can be assembled from de-corporealized organs and parts that imitate animate and inanimate beings, from dolphins to videogame characters. In this newly established customizable design framework, no material is off-limits, and no “thing” ends up being excluded from the catalogue of parts that generate the possible anatomies of sex dolls.]

Figure 36: Monstrous assembly of a bedroom-closet-workshop exhibiting sex doll's body parts.

Figure 37: Preparation of a generic closet-organ for transplant.

This inclusive and responsive design process relinquishes the interest in familiar assemblages of organs in favour of parts that resist categorization. This approach is a practical and working adaptation of the conceptual operations that in the 1990-s Diller and Scofidio called for in *Flesh*, and today Andrew Holder calls for in *Five Points Toward a Queer Architecture*. As an attempt to address our hugely expanded bodies, Diller and Scofidio expanded on Deleuze's conception of body without organs to consider a universe of organs without bodies, ready to be transplanted and grafted to generate new monstrous assemblages ⁷⁶. Diller and Scofidio's goal of conceptually reconstructing bodies from a pool of organs rather than from the pre-conceived images of totality, such as parti diagrams, is to arrive at multiplicitous design processes. Through embracing the

Bodies in Architecture

step 3 - ensure the sex doll body is comfortable and is located next to a window to ensure it gets enough vitamin D

step 2 - make sure the ceiling has a track for transporting bodies and the chair for body modifications has an exciting finish

Figure 38: Car-shop to body-shop transformation.

step 1 - dust-off an unused workshop

agency of each fragment, these processes no longer recall the pre-existing uniformly coherent reality ⁷⁷. Holder elaborates on this idea in his first point Toward a Queer Architecture, as he declares everything a brick ⁷⁸. He argues that every part that is seen and can be surveyed is ready for assembly, regardless of its origin story or lack of prioritized status ⁷⁹. The resulting assemblages of organs decoupled from their bodies become celebrations of divisions, splices, cuts, partial objects, conjunctions and disjunctions, connections, and recordings ⁸⁰. This openness toward embracing the agency of fragments while relinquishing the established investments into the original dreams of unity is the fundamental difference between design processes that generate ideal off-the-rack silicone bodies (see *Figure 2*) and sex dolls like the *Vajankle* (see *Figure 7*) that generate novel and ahistorical models, while remaining familiar.

During the mutually defining process of bodies inscribing their images into spaces, and spaces generating and modulating bodies, described by Elizabeth Grosz in *Bodies-Cities*, architecture and the body produce each other ⁸¹. Grosz compares this process to a simulation, as the environment and the body exchange coding through sexual desires, economic and psychological needs, as well as norms, ideals, and habits, while the body and its environment simulate each other ⁸². The environments produced as simulations of coherent and complete bodies, from Renaissance basilicas to the modernist era mass-produced housing, operate as rational machines, normalizing the body and subjectivity. In attempting to resist the operations that embrace organic unity of ideal bodies and spaces, the monstrous body of a sex doll assembled from accidental organs can be thrown into the simulation to overtake and transform the pre-existing reality into the image of the doll. Conceiving of familiar domestic spaces as a collection of bodies ready to be exploded into a pool of organs and re-grafted into new bodies, the experiments with a generic closet and a universal garage attempt to re-organize the initially recognizable rooms into new and remotely familiar spaces, responsive to the imaginary needs and wants of the sex doll.

[Figure 37: The body of the closet comprised of drywall partitions and particleboard sliding doors is exploded in a step-by-step process, revealing the objects and personalities that were neatly stored within. The daily routine of a sex doll whose body is continuously being re-shuffled and modified with new parts, calls for an open closet from a practical standpoint bringing the carnal, or formerly interior, surfaces of the closet to forefront of the architectural inquiry.]

Figure 38: The traditionally 'masculine' symbolic operations and functions of the generic garage are re-examined to address the desires of a sex doll in need of a body shop. In a step-by-step process, the aesthetic sensibility of the space advances to become less concerned with definitive and gendered characterizations and more with the performative nature of the doll as a conductor of pleasure. To maintain the functionality of the body shop, the portable car lift is modified to receive dolls, while the ceiling is infused with a track to transport silicone bodies. Instead of treating the grafted-on ceiling track as a 'scar' on the unruptured surface of the ceiling to be hidden in-between reveals and bulkheads, the track is exposed and intensified from the material and formal standpoint. Similarly, any transplanted organ, from the added structure supporting the lift to the storage of instruments and organs, is intensified.]

As individual spaces are experimented on, they are further assembled into a new monstrous unity, producing a more complex domestic space.

[Figure 40: The transformed and intensified closet and body shop are attached to a bedroom, forming a novel programmatic spatial condition concerned with performing and showcasing body modifications and fulfilling sexual desires.]

The experiments with home as a collection of spaces, or organs, to be re-grafted and re-assembled into new sex doll bodies aims to address the pre-conceived notion of home as a complete and coherent construct that produces complete and coherent bodies. The work that the sex doll body does for the idea of home, in this case, is relinquishing the object of architecture from its desire to be complete. Space that embraces the sex doll model and allows for body modifications and replications is in violation of the 'legitimate' modes of 'natural' production and re-production of bodies⁸³. However, in its monstrous state of always becoming, always being re-assembled, the sex doll bodies and spaces they simulate craft erotic, competent, and potent identities⁸⁴. The sex doll spaces emerge out of a chaos of organs without bodies and, therefore, operate illegitimately.

Figure 39: Study of an artificial womb transplanted onto a generic kitchen.

preparing spaces for the transplant procedure:

a - closet framed with gypsum board partitions and melamine sliding doors; b - closet doors are carefully removed exposing things and personalities hidden inside; c - closet partitions are rotated outwards and more than one colour of millwork is added; d - millwork is modified for storing Sex Doll body parts - space is ready for transplant.

e - concrete structure of the car repair shop is filled in with concrete masonry units (CMU) and car lift is installed; f - sealed CMU's are refinished with a mix of epoxy and bioglitter; g - car lift is repurposed to host Sex Doll bodies and tool storage is refinished with more exciting finishes; h - ceiling track is installed to carry the Sex Doll body around the shop and adjacent spaces - space is ready for transplant.

Figure 40: Evolution of a generic bedroom, a closet and a car shop into the monstrous assemblage.

The Anxious Body

Looking back at the emergence of the modern movement, Colomina and Wigley link the proliferation of the modern aesthetic of all-white buildings elevated from the humid ground to the development of psychology of health, paranoia, and sanitation ⁸⁵. As a response to the signature affliction of the past century - the bacterial disease, the sanitized and regulated image of modern architecture was aimed at designing a new human elevated above the ground where diseases bred ⁸⁶. However, the discovery of antibiotics has put an end to the age concerned with sanitation, and the mid 20th-century brought to light neurological diseases, such as depression, personality, and anxiety disorders. The assertive position of the 20th-century Freudian and behavioral psychologists was to connect the emerging mental health issues, among the population, with problems of “ego-development” while rejecting the importance of physical comfort, touch, and pleasure. Concerned with formalizing a model for a sexually and economi-

Figure 41: Harry Harlow's Wire and Terrycloth Mothers, 1965.

Figure 42: Temple Grandin's Squeeze Machine For Cows, 2015.

Figure 43: Lucy McRae's Squeeze Machine for Humans, 2019.

cally productive family unit, the general recommendations of behavioral psychologists were for parents to avoid caressing, holding, and physically comforting children and teenagers, to avoid producing excessively dependent adults, unable to properly function within the American society ⁸⁷. Regardless of the lack of evidence supporting the theory that restraint from physical connection among children will produce disciplined and mentally healthy adults, the behaviorist's belief had a significant impact on not only parental rituals but the planning of family homes. The introduction to the issue of *Assemblage* on House Rules speaks to the ramifications of producing architecture from the social position based on atrophied assumptions ⁸⁸. The establishment of strict hierarchies and physical division of spaces within mass-produced American homes further promotes the ideology of separation by assigning prioritized status to master bedrooms as sexually productive quarters while specializing the other sleeping and living spaces for different modes of individual productivity ⁸⁹. As Michael Moon writes for the *Queers in (Single-Family) Space* project, it is up to the individuals to collapse the normative specialized and sanitized categories of domestic spaces with those of the deep-rooted desires for comfort and pleasure ⁹⁰.

[Figure 41: Harry Harlow's experiments on infant monkeys produced the first conclusive evidence of the importance of physical touch and contact comfort for humans and humanlike animals. It took the suffering of many infant monkeys exposed to metal wired and soft terrycloth 'mothers' to demolish the behaviorist's claims. The experiments suggested that touching the warm and soft artificial mother covered in terrycloth helped the baby monkeys in developing social confidence and dealing with nervousness ⁹¹]

Le Corbusier's *The City of Tomorrow and Its Planning* became a proclamation of one of the first modernist agendas that acknowledged the impact that our environments can have on mental health. He linked the degeneration of industrialized post-war urban environments to a "physical and nervous sickness", arguing that one of the ways of up-keeping the human body was through "recuperating the nervous energy" ⁹², conceiving of architecture as a spatial-psychological device.

[Figure 42: An early example of a spatial device directly addressing issues with anxiety is Temple Grandin's research on the deep touch sensations and her experiments with the Squeeze Machine. Grandin explores the calming effects that deep touch sensations can have on individuals with Autistic Disorder, College Students, and Animals, as she argues deep, immersed, and tight hugging distributed along the entirety of the physical body can reduce neurological effects of anxiety ⁹³.]

[Figure 43: Today, the sci-fi artist Lucy McRae argues that the urban dwellers are living through the crisis of 'touch' and comfort, as physical contacts are replaced by virtual experiences ⁹⁴. McRae further embraced Grandin's idea of the squeeze machine as architectural space becomes impregnated with spatial-psychological devices responding to The Anxious Body as an emerging signature affliction of our time and a deep-seated form of being human.]

The range of human touch simulators can produce new kinds of tactile experiences that are deeply immersive and customizable to enable relaxation and force the physical body to produce higher levels of oxytocin to combat the uncomfortable feelings of the lingering Anxious Body ⁹⁵. However, despite the focus of McRae's work on the

effects of deep body sensations, the core argument of her addressing the effects of anxiety is aesthetic. Along the lines of Harlow's experiments, she calls for materiality that prioritizes mental health, comfort, and enjoyment to appear fleshy, elastic, and fuzzy ⁹⁶. In contrast, the fully rendered, cold, and sleek formal operations of contemporary architecture recall the aesthetic sterility of the modernist movement, which may be rooted in the resurgence of the desire for a coherent and productive body for a contemporary human. Without engaging the ongoing phenomenological discourse, McRae's critique of the purely visual focus of architectural design, and lack of concern for pleasure and tactile comfort, appears compelling, at least from the standpoint of the responsibilities that architecture acquires as a spatial-psychological device.

Notes

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itemized list: a - gold shiny mosaic tile; b - pink binural microphone; c - rare gold cactus plant; d - translucent folding paper blinds; e - collection of wigs; f - pillow; g - bamboo trusses to support equipment and wiring; h - stucco mixed with bioglitter; i - make-up products; j - comfortable chair; k - collection of human and elf ears; l - coloured contact lenses; m - silicone tentacles; n - Bender's head in skin colour; o - human buttocks in skin colour and in pink; p - collection of silicone feet

Figure 44: Monstrous assemblage of Sex Doll's organs.

Part III - Home of Imaginary and Partial Bodies

The Design Project

The design research experiments with the four imaginary and partial bodies, from attempting to spatially represent the bodies to conceptually charting their porous and fuzzy limits, highlight the potential work that the bodies can do architecturally. Among many other operations, the *Detected Body* charts a spatial design approach devoid of hierarchies; the *Social Media Body* relinquishes the interest in coherent singular design frameworks sustained by the pre-conceived images of totality; and the *Anxious Body* redefines established aesthetic operations to prioritize pleasure and comfort. The remaining *Sex Doll Body* becomes a creative catalyst generating a sensible approach to assembling domestic spaces from a universe of de-corporealized parts with no regard for their histories. As an extension of the research into the Sex Doll Body, the design project attempts to house the four imaginary and partial bodies in the speculative proposal of a home. The project aspires to simulate the bodies in their domestic environments through the process of a straightforward reconstruction of the desired reality while avoiding metaphors and sanitized abstractions. In contrast to the established design processes that adopt complete archetypal views on bodies to occupy the designed space described by Colomina and Wigley⁹⁷, the starting point for this project is the recognition of the indeterminate and partial nature of the bodies that will be housed in the home. As the singular physical body is being counted out of the equation, the programmatic and aesthetic focus of the home shifts to the

Figure 45: Monstrous assemblage of objects belonging to YouTube celebrities and drag queens.

needs and desires of the projected bodies. The bodies that each represent only a part of the multiplicitous human experience drive the design processes from assigning spatial functions to generating tectonic realities. The theme of partiality weaves through each of the four imaginary bodies and, in theory, lives on inside the many more unknown projected bodies that encompass the entirety of social, sexual, physical, technological, and other human experiences.

To avoid definitive categorizations of domestic spaces and the bodies they produce, Elizabeth Grosz suggests relinquishing the preconceived notion of bodies understood as organisms predating designed environments, as ethnological and historical characters ⁹⁸. She argues that design processes hinged on archetypes are only capable of producing more historically justified bodies ⁹⁹. To simulate a space that needs no justification or origin story in the Western sense, the design project begins with gathering disjointed parts, objects, and literal organs that belonged to no specific bodies, but many bodies discovered or imagined as part of the design research experiments.

[Figure 44: For example, the assemblage of organs discovered as part of the research into the Sex Doll Body consists of a collection of silicone organs responsive to a variety of fetishes. The pulpous feet, elf ears, and tentacles belonged to real and imaginary sex dolls ranging from animated characters to tentacle culture. This assemblage is the starting point for the design of space that addresses the Sex Doll Body.]

[Figure 45: The assemblage gathered from videos and social media posts of beauty gurus, influencers, and drag queens, ranges from the colourful wig collections to architectural finishes infused with bio glitter. This assemblage is the starting point for the design of space that addresses the Social Media Body.]

As the assemblages grow, the collected parts begin to define the program of the spaces they inform.

The Social Media Body assemblage crowded with wigs, make-up, and beauty products calls for a hybrid of a boudoir and a video production set to experiment with, and showcase the body-modifying rituals – the YouTuber's Boudoir.

The Sex Doll's assemblage informs the program of a storage room for the collected organs and a body-shop to modify and re-attached the organs, coupled with a bedroom, to test the novel anatomies of the dolls – a *Closet / Bedroom / Body-shop*.

The assemblage of self-care apparatuses and pleasure devices along with fuzzy surfaces, informs the program of the Bathroom as a space to address the nervousness of the Anxious Body.

The remaining Detected Body becomes an opportunity to face the established binary condition of interior, and exterior as it envelopes the three rooms into a Façade devised as a monstrous assemblage of parts found across the interior rooms.

The proposed program for the home is incomplete, as is the proposed speculative project. In embracing ideas of partiality, this work recognizes that the full extent of imaginary and projected bodies we maintain, at no point, can be formalized into a complete and coherent list. The project of housing these bodies, conceived as a place of difference populated by multiplicities, therefore, never stops.

Home as a Spatial Arrangement that Resists Categorization

The relationship established between the spatial arrangement of rooms and bodies presents itself as one of the more obvious normalizing mechanisms found within the environment of a Home. In *Queer Space: Architecture and Same-sex Desire*, Aaron Betsky draws a connection between the constructed idealized bodies conditioned by the dominant social narratives and domestic spatial constructs that produce strictly defined spaces that, in turn, produce more conditioned subjects ¹⁰⁰. The issue of *Assemblage* on House Rules further focuses on the instrumental role of the architectural form in domestic environments, pointing out the production of precise social, gendered, and racial models of being human popularized in Levittown and beyond ¹⁰¹. For example, cementing the designation of, and the relationship between the conjugal bedroom and other sleeping areas in a home, called for bodies that conformed to the constructed model of a productive family and a normative citizen. Recognizing the strict spatialization of rooms in a home as a mechanism of control, the design project that contains several rooms in need of arrangement and spatial order becomes an exercise in facing and dismantling

vol. 1: C-1-A-1-B-1

vol. 4: B-1-A-1-C-1

vol. 2: B-1-C-1-A-1

vol. 5: C-1-A-1-B-1

vol. 3: A-1-C-1-B-1

vol. 6: A-1-C-1-B-1

legend

lower level staircase D-2

top level staircase D-1

boudoir / youtube set A-1

bedroom / closet / bodyshop C-1

bathroom B-1

mid level staircase D-3

Figure 46: Random genetic compositions of spaces within the home

these mechanisms within the context of the project. As the spaces in the home simulate the projected bodies, the arrangements of rooms share the ideological territory with the established fragmented design strategy in its desire to avoid coherent and normalizing nature of existing modes of domestic spatial organization. The spaces that emerge out of the assemblages of organs respond to three projected bodies with the formal operation and program of each room simulating the needs and desires of each body.

[Figure 46: The Sex Doll's body is simulated in the Closet / Bedroom / Bodyshop (see yellow) room; the Social Media body is simulated in the YouTuber's Boudoir (see pink); and the Anxious Body is simulated in the Bathroom (see blue). To muddy the waters of the sterile genetic compositions of domesticities instilled by the Western architectural regime, the design project follows the same method used in the design-research experiment. The method recalls visualizations of the social media landscape powered by random parametric organizational models (see Figures 25-26). The three rooms were connected to proxies and then rotated, re-arranged, relocated and re-grafted onto each other to a degree of randomness possible within the constraints of parametric software. The vertical organization of the rooms along the shared "spine" allows for future expansion of the home to address more imaginary and projected bodies. In addition, the vertical circulation along the spine has the potential to become a territory to experiment with, blurring the clear horizontal boundaries between the rooms formalized by the floors.]

[Figure 47: The spatial arrangement of rooms to proceed with is randomly selected from the pool of potential anatomies of the home. The YouTuber's Boudoir ends up being at the top. The Bathroom is sandwiched in between and is slightly offset. The Closet / Bedroom / Body-Shop is at the bottom. Inside a common mass-produced American home, the vertical placement of rooms is linked to sexual and gendered ideologies¹⁰². As such, the basement, located at the bottom, is the territory for masculine operations, while the master bedroom, located at the top, is the territory for feminine operations¹⁰³. The goal of the exercise of randomly organizing the rooms for the projected bodies is to resist these definitive categorizations.]

The vertical element, or spine, shared among all the rooms is the anxiety-reducing device turned spiral staircase. In her research into drugless alternatives for treating anxiety, Temple Grandin studies anxious and poorly handled cattle in which she describes the perception of space and the flight zone of cows as critical components to cow's emotional well-being ¹⁰⁴. The spatial solution to cow's anxiety when travelling through the race becomes her spiral design of the forcing pen, which today is considered a universal good practice in cattle handling. Since in her study of individuals with Autistic Disorders, College Students and Animals, Grandin draws parallels between causes and solutions to anxiety among all of her subjects ¹⁰⁵, the design of the spiral staircase adopts her methodology for calming cows to not only address the Anxious Body component of the project but all of the projected bodies.

[Figure 48: The design of the staircase adopts the spiral form of the forcing pen, along with the mandatory crowd pen, to provide a break for the cows or a coffee break for the bodies. The staging area at the top of the staircase is an informal nook meant for bodies to relax and gather up the courage to face their anxiety.]

Figure 48: Spiral staircase conceived as a calming device for the Anxious body (left) based on Temple Grandin's design of the spiral forcing pen for cattle (right).

Figure 49: Top View of the boudoir with movements of the visitor mapped out.

Room for the Social Media Body – The YouTuber's Boudoir

[Figure 49: When diving into each room, the question of representation becomes a challenge, as the rooms are generated with no singular, coherent or geometrically sound image in mind. The sanitized abstractions of plans, sections, or elevations have the potential to project complete and coherent images, which this project attempts to resist. Therefore, each room is represented through the eyes of an imaginary visitor, an architectural voyeur of sorts, whose movements are mapped on the perspectival plans of the rooms. The perspectives produced by the visitor represent their partial and subjective experience of the spaces, as the visitor stages their shots in order to upload them to social media.]

Figure 50: View A1 - View of the boudoir organized according to principles of the streaming platform's screen resolutions as a system of architectural proportions; this space is dedicated to the Social Media body.

Figure 51: (top left) View A2 - View of the boudoir organized within the 1280x720 resolution ratio - towards the camera.

Figure 52: (bottom left) View A3 - View of the boudoir organized within the 354x480 resolution ratio - view from the camera.

Figure 53: Stills from Grimes' and Trixie Mattel's make-up routines.

In his deconstruction of *Mario Banana No1*, Andrew Holder describes the environment created in the film as forged from parts that are indifferent to an authentic or organic relationship between the means of construction, and the environment ¹⁰⁶. The resulting assemblage of parts into a new form, even though divorced from the histories of organizing principles of each part, remains recognizable through the familiarity of the parts. The image of a woman constructed in *Mario Banana No1* is recognizable in its reference to the constructs of feminine bodies, clothing, and accessories. However, the image is also creatively re-organized, re-packaged and exaggerated to produce a novel reality.

[Figure 53: The creative operation observed in the beauty tutorials posted by Trixie Mattel and Grimes on social media recalls Holder's methodology of producing new images that remain familiar and resist categorization. In a step-by-step video, Trixie creatively subverts and exaggerates every feature of her face to broadcast the new image of a woman, while Grimes introduces new parts onto the body to alter the image.]

In simulating the Social Media bodies of beauty gurus, drag queens, and other celebrities, the design of the YouTuber's Boudoir is an attempt at following Holder's methodology to create a new, but relatively familiar image. The new image aims to decouple from the gendered norms and histories of boudoir and respond to the desires to stand out and establish a following for a YouTuber. The functional and aesthetic expressions of the space exist in parallel universes. While remaining a functional backdrop for making videos, a room to experiment with make-up and a storage space for the filming equipment, wigs, and beauty products, the formal, and material realities of the space are rooted in the aesthetic sensibility of the manufactured, plastic and vivid world that beauty influencers generate to establish a following. In her contemplations on *Opulence*, Natalie Wynn deconstructs the aesthetic displays of YouTube celebrities as oscillating between the resistance to the aesthetic regime of "good taste" associated with social, economic, and racial exclusionary practices and the love for shiny things ¹⁰⁷. Wynn's interpretation, along the lines of Jacques Rancière's thoughts, highlights this room's aspiration to put into question the real regimes of history, geometry, convention, and "good taste" established in the collection of texts, rules, and practices that constitute the system of Western architecture.

[Figures 51-52: For example, while establishing the height to width proportions of the boudoir, the commonly used one-third to two-third geometric relationship that migrated from the rulebooks of art regimes ¹⁰⁸, was replaced with an equally valid system of proportions based on the available resolutions of the YouTube streaming window, ranging from 426x240 to 3840x2160 pixels. Without the imperative need for historically justified formal operations, the pool of possible guiding principles for the architecture to follow expands.] [Figure: The aesthetic display of the boudoir puts the idea of 'shiny' materiality to work in support of the notion of partiality. Each object, or organ, transplanted into the space operates in line with its interests, as opposed to preconceived ideas of totality. The agency that the design process entrusts the parts with, manifests in an assemblage of disordered organs producing a novel image.]

Figure 54: View A4 - Elevation view of the wig and equipment storage area of the boudoir.

Figure 55: Top View of the bathroom with movements of the visitor mapped out.

Room for the Anxious Body – The Bathroom

Conceiving of the bathroom as the most psychosexually charged room in a building, Colomina and Wigley describe Le Corbusier's toilet room in his apartment, completed in 1934, as a source of anxiety for his wife ¹⁰⁹. Yvonne was deeply ashamed of the bidet that Le Corbusier intentionally placed at the open threshold between the bathroom and the living room, exposing whoever attempted to clean themselves. Hence, she often chose to cover the bidet with a tea towel ¹¹⁰. The ingrained sense of shame and repressed feelings regarding bathroom appliances that swallow the disavowed fluids coming out of our bodies have been mainly ignored and sanitized within the mainstream architectural discourse, as architects are rarely asked to explain their toilet philosophy in regards to the generally small, mundane, and tucked away bathrooms ¹¹¹. The combination of the lingering sanitation paranoia and the Western discourse on social normalcy, place the bathroom appliances into the category of the odd, the abnormal, and the perverse, which can become a legitimate source of anxiety as we face the appliances regularly. As a result, the repressed body produced inside the tiny sanitized bathrooms, operates in denial of a range of sexual, psychological, and moral economies that deal with the physical and projected realities of being human. In addressing the feelings of shame that the Anxious Body produces toward the mere thought of a bathroom, the 'abnormal' is opened in the planning of the Bathroom and celebrated aesthetically. The design of the Bathroom for the Anxious Body became an experiment in transplanting the collected experiences, objects, and rituals of self-care into an entirely open environment. The Bathroom's program and formal expression are divorced from the institutional desire for cleanliness and upkeep of the physical body.

[Figure 56: Instead, the space is responsive to the desires for comfort and pleasure of the Anxious Body, manifested in the virtual reality meditation bathtub and plush resting settee area. The dreams and desires of the Sex Doll body are recalled in the severe lack of privacy of all bathroom appliances and exposed piping that sexualize the entirety of the internal landscape of the room.]

Figure 56: (previous spread) View B1 - Perspective view of the bathroom dedicated to the Anxious body.

Figure 57: (top right) View B2 - details of the bathing areas - virtual reality / sensory deprivation area.

Figure 58: (top right) View B3 - details of the bathing areas - generic bathtub characterized by a severe lack of privacy.

[Figure 57: Among other means of addressing anxiety and nervousness, the initial intent was to introduce a sensory deprivation tank into the bathroom. However, further research showed that many enclosed tanks could induce anxiety ¹¹². Therefore instead, this imaginary crawl space became a virtual reality bathtub and a meditation space, as virtual reality meditations have been documented to have some success in catering to anxiety ¹¹³, which we all experience in unique ways. The tectonic operation of the space further works in support of the Anxious Body, as the tactile pleasure and access to natural light facilitate the transition into the calming digital landscape.]

The desire to have unobstructed views of the entirety of the Bathroom during moments when the physical body is at its most vulnerable, becomes one of the drivers for the spatial organization of the transplanted parts that generate the Bathroom. The many phobias that manifest in the Anxious Body call for a clear and open space that becomes a field to receive the grafted organs, however sacrificing the privacy of the physical body.

Figure 59: (top left) View B4 - bathroom elevation view of the living wall and the resting area transplanted from Villa Savoye and equipped with an apparatus to maintain levels of injectable substances in the Sex Doll's body.

Figure 60: (bottom left) View B5 - detailed view of the bathroom vanity area equipped with surgical lights to assist with various grafting and transplanting procedures.

[Figure 60: The living wall of the Bathroom is a continuation of formal experiments with objects found on social media from the design research phase of the project (see Figure 32). The prior hybrids of objects and surfaces produced using drone mapping software, evolve to become formally simplified versions of themselves to host plants and bathroom appliances. Defying the established canons calling for smooth tiled surfaces in wet areas as means of sanitary upkeep, the formal operation of this tiled wall prioritizes the imaginary aspects of possible ceramic geometries.]

[Figure 59: The plush settee, located centrally, was transplanted into the bathroom following Le Corbusier's call to embrace the tools that are awakening inside us, and return the human body back to the place of genesis where beings are remade ¹¹⁴. The originally ceramic settee from the bathroom in Villa Savoye was transplanted into this bathroom, refinished with plush fabric, and equipped with an apparatus that delivers injectables such as Botox, and other gels into the physical body on demand. The notion of remaking beings today can become a question of urgency and convenience in our busy schedules.]

Figure 61: Top View of the bedroom/closet/bodyshop with movements of the visitor mapped.

Room for the Sex Doll Body – The Closet / Bedroom / Bodyshop

In his letter to Beatriz Preciado, Tim Stuetzgen contemplates on the emerging condition of the postporn politics that results in multiplicitous and liberating performativities of masculinity, femininity, and otherness, to surface through the cracks in the dominant discourse of the mainstream porn ¹¹⁵. The established process of ultra-speedy accumulation of images, money, and normative bodies has been instrumental in regulating desires and promoting iterations of the same sexist spectacle since the early onset of the internet ¹¹⁶. Operating as yet another institution, alongside Foucault's institutions and domestic regimes, porn participates in the production of social and sexual normativity, driven not only by ideological principles but also by the underlying economies. Flooding the digital space with a universe of short clips with the usual coherent stories, acts, bodies, and genders, the porn streaming companies hope to coerce customers to subscribe for a fee ¹¹⁷, aspiring to meet the surface demand for the mainstream narratives. However, where there is repetition, there will emerge difference. In his letter, Stuetzgen deconstructs the videos of *Belladonna*, a porn performer that defies the heteronormative discourse as she effortlessly mixes up silicone and imaginary body parts and genitals in her performances, defying principles of organic continuity and wholeness ¹¹⁸. The real and imaginary bodies that are produced in engaging with the creative and productive forms of multiplicity in porn, including the bodies of sex dolls, no longer succeed in reconstructing desires and body imagery promoted by the instruments of power. The design of the Closet / Bedroom / Bodyshop is a continuation of the design research that explores spaces that could be intensified and grafted to a generic bedroom, reorganizing the familiar domestic space into an imaginary workshop where creative operations similar to the ones *Belladonna* performs in her bedroom, could be performed on the silicone bodies of sex dolls.

[Figure 63: Starting with the display for the microcosm of body parts that can be transplanted and re-organized to craft novel desires and dolls, the closet found in every generic bedroom is exploded to showcase the potentials for body modifications.]

Figure 62: View C1 - Elevation view of the bedroom / body-shop dedicated to the Sex Doll body.

[Figure 62: Adjacent to the open closet is located the modified gynecological chair attached to a car shop rig that hosts the bodies of the dolls while their parts are being re-organized. The in-between ontology of the body-shop area as a formal workshop and a place to craft and define sexual desires emerges out of the accidental intermixtures of transplanted apparatuses and practical necessities.]

One of the priorities of this monstrous assemblage is the functionality of the ceiling-mounted rail system and the body-shop chair used to manipulate the doll's body and move it around from the bed, to the closet area, and back to the chair. The physical body, in this case, plays the role of an assistant in the life of the doll as it moves across the internal landscape of the room.

Figure 63: (top left) View C2 - Elevation of the exploded closet.

Figure 64: (bottom left) View C3 - Elevation of the Sex Doll's bedroom.

Figure 65: Formation of the exterior layers from the collection of interior parts.

Façade for the Detected Body

As one of his *Five Points Toward a Queer Architecture*, Andrew Holder declares that the façade is everywhere, exposing the fallacious nature of absolute limits of privacy and interiority that facades represent in the architectural discourse ¹¹⁹. As the experiments in representing the Detected Bodies in lidar vision show, the clear boundary between exterior and interior is a social construct that becomes fuzzy and very difficult to distinguish in the atomized mappings of spatial realities devoid of hierarchies (See Figures 12-13). The very idea of the exterior ‘skin’ of the building operating distinctly from the carnal space, originates in the theories of organicism as a metaphor for fixed hierarchies that prioritize the subjective experience of a human body having an inside and an outside ¹²⁰. However, the true function of the organic boundary is porous, and so is the function of the perceived limitations of privacy in an urban home. As Holder argues, the imminent interdependence and physical closeness of urban dwellings, in practice, entail a sense of total publicity. The public-facing facades reach deep into the home as changes on the ‘outside’ trigger reactions on the ‘inside’, implicating the interior space as a perpetual exterior ¹²¹. To further confront the fallacious oppositions between the perceived interior and exterior, the design of the façade begins with harvesting a random collection of parts and surfaces to generate the façade as an extension of the interior space, using the same ‘genetic material’.

[Figures 65,67: The collection of planes that produce the façade emerges as a direct inversion of interior surfaces in some cases, and as new imaginary assemblages in other cases. As the intensity of each plane is concentrated within its perimeter, the intersections of the planes become the territories where creatively productive tension emerges between the surfaces. The desire for ‘clean’ and crisply defined corners is problematized as an inherent symptom of architecture’s affinity for images of clarity and completeness. Instead, the emerging corner operations are undefined in their totality, allowing the planes of different materials to negotiate their mergers and penetrations on their terms.]

Figure 66: Stills from a video showing the initial training process of the façade simulations.

Figure 67: Perspective view of the initial 'subjective' assemblage.

In an attempt to blur the boundaries of the planes beyond the corners and disorient the plane's histories, the Google's Deep Dream neural network is used to train the algorithm to 'see' the patterns and forms of each plane in the rest of the planes, in a way training the façade to evolve and learn from itself.

[Figure 70: This training distances the façade's formal operations from the initial scheme that is a product of subjectivity. The ascription of agency to the parts of the façade, brought about by the availability of neural networks, generates new images that otherwise are be unimaginable to the subjective process, while remaining familiar in the context of this façade.]

Bodies in Architecture

generation 1 surface

generation 2 surface

generation 3 surface

generation 4 surface

generation 5 surface

generation 6 surface

Figure 68: Stills from a video showing the training process of the Boudoir facade surface. The generation number suggests the number of Deep Dream passes the image experienced.

generation 1 surface

generation 2 surface

generation 3 surface

generation 4 surface

generation 5 surface

generation 6 surface

Figure 69: Stills from a video showing the training process of the Bathroom facade surface. The generation number suggests the number of Deep Dream passes the image experienced.

gen. 1

gen. 2

gen. 5

gen. 6

gen. 3

gen. 4

gen. 7

gen. 8

Figure 70: Stills from a video showing the step-by-step transformation of the entire façade as it learns from itself through the Deep Dream network.

Conclusion

In exploring ideas of partiality and indeterminacy in architecture this work identifies four specific projected and imaginary bodies of a contemporary human, capable of exploding the image of a singular and coherent body into multiplicities. The attempts to address newly conceived multiplicitous subjects of architectural operations focus on reworking the established conventional processes preoccupied with coherent bodies, comprehensive design processes, categorization and generally accepted aesthetic and tectonic expression.

The Design Research portion of the work confronts archetypal methodologies that address bodies architecturally and aims to expand the catalogue of possible programmatic and material domestic assemblages. Each examined imaginary body becomes an entrypoint for a specific design exploration that grows the assemblages. The Detected Body pushes the limits of boundaries manufactured to deligniate binary conditions by stripping down bodies and spaces of their features that fuel categorization. The Social Media Body grapples with weakening the effects of singular authorship on design processes by means of technology that promotes dispersal of authority. The Anxious Body argues for changing priorities in materiality from superficial protocols to real desires for pleasure and comfort. With the three bodies contributing to the emergence of the resulting design project in varying degrees, the remaining Sex Doll Body becomes an unexpected and creatively productive generator of not only the space making methodology, but the aesthetic expression of the speculative home. The disorganized body of the sex doll drives the design process that begins with parts and inadvertant schemes for transplanting the parts, as opposed to starting with organized design frameworks, such as parti diagrams. This process becomes one of the most important discoveries of this work, as it attempts to contribute to the challenging question of incorporating partiality and indeterminacy into architectural operations. However, the approach that acknowledges the agency of parts remains obscure without a clear formal and aesthetic expression. Yve-Alain Bois explains the problematics of developing a clear and coherent visual language that aligns with conceptions of partiality in his critique of deconstructivist movement that in an attempt to dismantle the structuralist art regime, formalizes an anti-regime, which is as 'perfect' and defined as the regime itself ¹²². From the standpoint of Bois's argument, the visual language developed by engaging with the sex doll model in the home is seen as one of many possible aesthetic expressions of grafting and trans-

planting processes. The aesthetic expression saturated with overexposed surfaces and objects emerges out of an accidental intermixture of personal sensibilities, desires to resist the manufactured conventions of ‘good taste’ in Western architectural discourse, and the catalogue of materials and forms developed through research into the projected bodies sensed by technology and media. The project of the home attempts to build alliances with ideas of partiality both through design methodology and incomplete formal operations. However, the aesthetic expression of the project is not formalized as an overarching framework, but rather a product of specificity. In lieu of maintaining Western architecture’s preoccupation with comprehensive formal and abstract schemes, this work argues, it is imperative for the design discourse to get personal with specific subjects, in this case imaginary and multiplicitous bodies, and root the aesthetic sensibility in understanding of the subjects.

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