

DOMESTIC DATA: TOWARDS AN AESTHETICS OF INTIMATE RESISTANCE

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[SLIDE 1]

The COVID-19 pandemic propelled a radical reconfiguration of spatial aesthetics that is yet to be fully resolved. From the closing of borders to the prohibition of close personal interactions, the contagious condition of the virus caused a sensibility of space to gain a heightened embodied quality, and a reconstituted subjectification of space conditioned by state systems of informatic control. Notwithstanding the wider socio-spatial landscape, a specific technological focus to the conditioning of the domestic home reveals further entangled circumstances. With the mass adoption of online modes of communication and the co-mingling spaces that were formerly distant or closed from one another, new modes of digital intimacy emerge where the domestic and the institutional deterritorialise each other and existing binaries of public and private are agitated. Notwithstanding established feminist and Marxist affirmations on “the importance of domestic labour for the functioning of capitalism” (Ceuterick 2020:1), people are alienated from their home as it becomes a site of work, the private space being institutionalised.

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The screen-based mediation of interior spaces under the praxis of ‘Working From Home’, can be categorised under the broader digital infrastructures of image circulation that have a distinct aestheticisation of space. The encounter with the mosaicking of interior spaces produced by the Zoom screen becomes complicit with more deliberate “social media architecture” (Fiocco & Pistone 2019), and those physical environments, designed or otherwise, that are co-experienced via the digital screen. These activities of digital image consumption contribute towards the datafication of space, accidental or deliberate, interior

and otherwise. Through embodied co-constitutive practices of 'Instagram-able' place-making, "social media engagement is increasingly habituated as an interface of everyday urban encounter" (Barns 2019:160), and the image under circulation informatively codified as an expression of being-in-space. As image-based digital services, both Zoom and Instagram are of the same order, with their specificity secured through the technological platforms on which their infrastructural condition is performed, and from which surplus value can be extracted by the platform itself. This distribution of spatially-oriented images as a contemporary technological praxis is embedded in the regime of platform capitalism most stealthily designated as the 'sharing economy'.

THE DATAFICATION OF THE DOMESTIC

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Ongoing research concerning the datafication of domestic interiors and the reification of digital intimacy as it relates to the category of "interior-as-image" (Loder forthcoming) has been developed through a particular focus on the Airbnb accommodation sharing platform. A service that has successfully disrupted the established conventions of the tourist accommodation market, Airbnb is not without negative socio-economic impacts. Across a manifold of scales, Airbnb as a condition exercises influence that includes "rising rents, diminishing housing stock, gentrification and the influx of unwelcome tourists who disrupt the calm veneer of everyday life" (Molz 2018, 14). But on a more intimate level and via commodification of the host-guest relation activated in the occupation of someone else's domestic residence, Airbnb "is both enabled by and productive of certain imaginaries and spatialities of home" (Roelofsen 2018, 1-2), where notions of individuality, personality and privacy are experiences for consumption. In the contractual encounter between guest and host, thresholds of intimacy and the conventions of home where we allow ourselves to be most vulnerable (Bachelard 1994:137) are renegotiated, and new dynamics of power and capital are activated through the performance of a reconfigured domesticity.

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These complexities stimulated by the arrangements of platform capitalism are rendered most directly via the images of interiors consumed on the Airbnb website. Motivating what design critic Edwin Heathcote (2020) designates as the “Airbnb aesthetic”, the screen-based mediation of domestic interiors articulates a specific sensibility of individuality and intimacy, delivering “a dispersed network of the endless interior” (Heathcote 2020) where distinctiveness coalesces into homogeneity. Existing notions of intimacy become frayed, and physically intimate spaces are substituted with the image of the intimate.

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It is essential to locate the category of interior-as-image and broader place-based image-making practices in the context of the integration of images in machine learning processes. Notwithstanding Airbnb’s processing of images for purposes such as room categorisation (Hoh 2019), but machine learning can advance capacities at a much greater resolution, as exemplified by Facebook’s recent extraction of a dataset of 1 billion images from its subsidiary Instagram to develop a new AI model for object recognition (Goyel et al. 2021). In excess of such image-based procedures of machine learning and the identification of what Shoshana Zuboff designates ‘surveillance capitalism’, is the warning that technology platforms increasingly strategise to “acquire ever-more-predictive sources of behavioural surplus: our voices, personalities and emotions”, and with “the reorientation of knowledge to power, it is no longer enough to automate information flows about us; the goal now is to automate us” (Zuboff 2019: 8).

Returning to the spatial circumstances of intimacy this research is concerned with, the destabilising conditions of ‘Working from Home’ practices can be located within a broader landscape in which the digitisation of the domestic interior is impelled by the categorisation of interior-as-image. Under observation by technologies of machine vision, the domestic interior is subjected to an informatics of domination in which intimacy is contradictory; an experience of withdrawal from the world that is simultaneously commodified within it, and the further reification of feminist designations of the domestic as a site of capitalist labour. It is therefore essential to more adequately circumscribe the regimes of machine vision that

act upon spaces of the domestic and determine if the aesthetics can be renegotiated or resisted.

PHOTOGRAMMETRY AS METHOD

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A strategy of further intrusion potentially already under way was revealed by Facebook in 2018 with a project to utilise personal photos and videos uploaded by a user and recreate in digital form the physical environment where the recordings were made. Using the process of photogrammetry, a digital procedure that constructs a 3D model from 2D images, intimate spaces can be subjected to the extractivism of technology platforms and for domestic spaces to be recreated for digital inhabitation by others.

[SLIDE – PHOTOGRAMMETRY AS METHOD]

Large datasets undoubtedly produce more detailed and authentic outcomes, but research undertaken using images extracted from the Airbnb platform reveals that inhabitable results can be achieved with reduced and limited numbers. Using 3D printing to produce physical results, it is possible to further speculate on the implications by which machine visioning can be instrumentalised and for the 'endless interior' to spill into actually existing spaces. These artefacts of extractivist production are partial objects resulting from "partial perspective" (Haraway 1988:583), the materialisation of troubled boundaries of the hidden and the visible, the public and the private, and an articulation of the commodification of homogeneous individuality. Moreover, their partial condition provides insight into the visuality of the machinic apparatus, in abeyance of anthropocentric objectivity. Donna Haraway pronounces the siting of boundaries as a "risky practice" (Haraway 1988:595), and these artefacts are 'risky objects'; they engage the dispersed models of capitalist production and actively generate the unequal dynamics of intimacy the datafication of the interior performs. Photogrammetry is deployed as a "material semiotic practice" (Haraway 1988), where the 3D printed artefact agitates thresholds of digital intimacy when circulated and

experienced, an apparatus of bodily production that performs dissolved thresholds of public-private and the manifestation of distinct ethico-onto-epistemological conditions.

VIRTUAL REALITY AS BODY-SPACE HYBRID

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To underscore the dominance to which any particular social media platform can extend its reach into private and intimate experiences, attention can be directed to another tentacle of Facebook's research and development, namely Virtual Reality (VR). During September 2020 in the midst of Covid-19 pandemic, Facebook launched the second generation Oculus Quest VR device, an affordable entry level unit with an all-in-one wire-free tether-less design, with motion tracking conducted via four headset-mounted cameras in combination with inertial sensors.

In the context of digital intimacy as outlined previously, of most direct significance is the prerequisite of a Facebook account to use the Quest, imposing users commit to the company's ecology of data-collection. Notwithstanding the data-capture of bodies in motion where "spending 20 minutes in a VR simulation leaves just under 2 million unique recordings of body language" (Bailenson 2018), the Quest is effectively a head-mounted room-scanning device, algorithmically analysing the environment and its contents to determine position and movement. While the resolution and filtering of the machine vision process is partially ignorant of the qualitative or design aesthetics of any interior environment, of essential significance is the location and orientation of objects, furniture and boundaries of space. In addition, recent updates for the Quest allow users to designate furniture – specifically your couch – to be located and identified in the digital mapping of the environment. The cataloguing of biometric data and the physical characteristics of Quest users is of obvious concern, but it is essential to consider the spatial praxis itself and its computational entanglement with position and movement.

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Under this articulation of VR, a distinct body-space hybrid can be identified that conforms with Haraway's foundation of the cyborg (Haraway 1991), but it is vital to underscore the conditioning medium of the interior-as-image. As noted earlier, the image-based machinations of the Airbnb platform "distributes a certain form of digitalised intimacy stratified with various categories of inequality" (Loder forthcoming) across a manifold of scales from the domestic interior through urban to global contexts. The troubling of the boundary conditions and collusion with inequality indicates how visioning procedures "are active perceptual systems, building on translations and specific *ways* of seeing" (Haraway 1988:583, original emphasis) and sediment a distinct capitalist objectivity. As Donna Haraway urges: "Understanding how these visual systems work, technically, socially and psychically, ought to be a way of embodying feminist objectivity" (ibid.), and can offer a means to renegotiate or resist the capacity for behavioural modification attributed to surveillance capitalism and other forms of influence.

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The capacity for behavioural modification and concealed bias in imaging technologies is well-documented, for example the 'Shirley Card' used by Kodak to calibrate its photographic film, a standardisation that produced optimisation for white skin to the detriment of people of colour. In the digital context is the widely used ImageNet dataset of labelled images developed in 2009, its racial bias repeatedly demonstrated, most recently in the 2019 exhibition *Training Humans* by artist Trevor Paglen and AI researcher Kate Crawford. These are the most visible instances demonstrate how inequality is inadvertently embedded in society through the use of such technology. Following this, obvious questions emerge as to the precise character of the dataset extracted from Instagram mentioned earlier, where any trend in image production has the potential to influence outcomes from the machine learning procedures.

Under the spatial concerns of this research, attention can be directed towards the locational mapping of interior spaces conducted by camera-based VR devices such as the Oculus Quest. While the resolution of imaging is currently relatively crude, it nonetheless has the capacity to determine spatial configurations to which intersectional characteristics of class,

gender and cultural background can be attributed. These might include the size and scale of an apartment, furniture arrangements, and broad decorative stylings such as pattern and ornamental tendencies. When combined with biometric data on bodily movement and posture, as well as other metadata mined from a social media profile, a complex digital model with a comprehensive spatial character can be extracted. Positioned within a broader scheme of location-based social media activities, Instagram-able architecture and the impact of technology platforms at urban scale, a deeply stratified datafication of spatial experience is extrapolated.

TOWARDS AN AESTHETICS OF INTIMATE RESISTANCE

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The body-space hybrid articulated by this research paper emerges under the regimes of algorithmic imaging that are increasingly embedded in contemporary society, where the machine eye becomes embodied in a co-constitutive relation with its spatial context. When exposed to improvised performances of a photogrammetric methodology, boundary events are reified that dis/entangle and dis/embody binaries of the seen and unseen, the public and private, and exemplify a “partial way of organising worlds” (Haraway 1988:583). To test the extent to which a spatial context might contribute to the co-constitution of the body-space hybrid, this research looked to the aesthetic practices of German sculptor Tobias Rehberger and his iconic black-and-white architectural installations. Based on the principles of dazzle camouflage developed to obscure naval ships during World War 1, Rehberger’s installations confound the eye, producing a spatial disorientation for the human viewer.

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But photogrammetric experiments demonstrate the preference allocated to the implicit aesthetic order that amplifies the digital reconstruction of space. Dazzle camouflage was developed to confuse the human eye, but the machine eye is adept at deconstructing the interior-as-image – as data – to determine structure and depth (May 2017). While photogrammetry can be productive of a partial perspective, the distinct difference of

Rehberger's aesthetics is complicit with an objective completeness under the body-space hybrid.

Nonetheless, attention should be directed less at the condition expressed in an anthropocentric circumstance and a designed environment, but rather an interrogation on how a spatial aesthetic as appropriated by the machinic visioning apparatus can impact us, and the body-space hybrid. The characteristics of the partial are potentially more problematic to reveal since it is the completeness of objective perspectivism through which VR devices gain their functionality. But it is the potential disruption of functionality that will have the greatest agency for the body-space hybrid. The camera-dependent VR device requires uniformly-lit and, as demonstrated via the dazzle camouflage photogrammetry experiment, environments that are non-uniform in spatial aesthetic to convey a smooth and consistent virtual experience. To disrupt this impels a dis/entanglement of cognitive movement, an antagonism of the inwardly physical and the outwardly perceptual, where one's sensibility of movement is partially detached from the observed in-world experience. This rupturing and glitching is again a "risky practice" (Haraway 1988) that stimulates the emergence of boundaries and contradictions of digital intimacy.

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The Venn Room (2019) by Space Popular is a proposed modelling of the digitally motivated spatial entanglements outlined at the start of this paper, and might initially appear an authentic presentation of the body-space condition, where binary locations are contiguous with each other. But lacking is any sense of the body itself, with emphasis directed toward the aesthetics of the spatial environment in isolation, contributing a completeness of perspectivism. Resistance to machinic regimes demands a consideration of the body, and the deployment of partial practices such as photogrammetry that can allocate greater possibilities to the body-space hybrid.

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