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THE CRITIQUE OF CYBERNETIC SETTLEMENT

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THEY TELL YOU CLIMATE
CHANGE IS KILLING LIFE ON EARTH.
AND THAT IT'S YOUR FAULT. [1]

The homing device inserted behind her left ear begins to buzz, indicating proximity to her final destination. She breathes evenly through her oxygen mask and adjusts the associated algae panel. The «rucksack» sits snug on her back, her boots meet an uneven forest ground, beneath which the mere whisper of a mycelium layer struggles to be heard. It's a snap cold morning, imperiously observed by a searing sun. You could catch a chill and a sunburn, both, without the right protection. She's been trekking for weeks, months, years now; soon it will be 2221. A relatively uneventful journey, she's not had to spend too much of her ammunition. Finally, amidst the devastated underbrush, in a clearing below the burnt-out trees, she catches her first sight of the Bucky domes. As she nears the settlement, her audio crackles and a voice-over butts in, «You've been waiting for architecture to evolve. For affordability, sustainability, resilience and healing to finally...» she makes an adjustment and tunes out mid-sentence.

«Geoship 62» is what she has named this outpost, after the protean company responsible for the initial infrastructure for the dome settlements. One of the original sponsors was the Buckminster Fuller Institute, and the allusion to Bucky's Spaceship Earth is evident, if anachronistic. The domes date to the mid-2030s, and are composed of «bioceramic» panels designed to last 500 years, and to be rot-, fire- and rust-resistant. They can be distinguished from the well-known Bucky geodesic dome by their slightly pointed Bruno Taut c.1914 peaks. What commenced as an entrepreneurial venture has now become an outpost of survival: dreams of co-living stripped to a survivalist minimum. All forms of comfort have well and truly been evacuated from this space.

She approaches warily, glimpsing signs of life through translucent portals, all smeared with dust and grime...

A HOME ON THE LAND
IS YOUR RIGHT.

In her 2016 essay «Fear of a Feminist Future», writer Laurie Penny characterised the heteronormative, hypermasculine visions of alt-right dystopian science fiction as «brotopias». [2] Citing «mancession» anxiety about a feminist present whereby men feel increasingly anxious about being replaced by women on the job market, Penny points to the ways in which the dystopian narrative of alt-right science fiction imagine a world in which women seek protection from their male counterparts, and men regain the status of «provider» in a range of bloody, apocalyptic, new world orders. As she puts it:

«A core idea behind this logic is that since female enfranchisement is a relatively late development, it therefore counts alongside nylon stockings and air conditioning as one of those modern luxuries that will have to be done without in the post-civilization. Feminism, to the conservative imagination, is a modern indulgence, one of many trivialities to be cast by the wayside like a child's empty-eyed doll on a nuclear battlefield.» [3]

The link between feminist emancipation and the environmental technology of air conditioning is not a flippant one. As Penny later points out, women's liberation is itself an artifact of technology as much as culture. As feminist scholars of architecture, we would do well to acknowledge that far from being neutral, highly engineered «modern indulgences» like air conditioning have played an important role in the fight for gender equity in the domestic sphere. In his 1969 «The Architecture of the Well-Tempered Environment», Reyner Banham describes the stench and poor air quality that dominated the Victorian experience of the domestic interior, linking the spread of technologies for maintaining «interior comfort» to upper-class female emancipation within modern capitalism:

«These people, in households that bred, or were presided over by, ‹New Women› or their emancipated equivalents in non-Anglo-saxon countries, were the main support and proving ground for any environmental innovations that could be produced in domestic sized packages.» [4]

Banham sees these New Women first and foremost as consumers: their emancipation lies in their ability to purchase or commission the installation of air conditioning and mechanical ventilation systems to escape the negative externalities of a rapidly industrializing urban condition. In comparison, there of course exists an architectural «herstory» of female architects, engineers, and innovators for whom emancipation from capitalism's more detrimental qualities was secured by acts of design and production, including the articulation of bold utopian visions at a societal level.

Perhaps most famous of these accounts is Dolores Hayden's «The Grand Domestic Revolution», which narrates the way in which Alice Constance Austin's design of the experimental cooperative community of Llano del Rio united feminist and socialist causes, offering both a retort and an alternative to the «capitalist city of Los Angeles» nearby. [5] Constance designs a colony of kitchenless houses for a 900-strong community as a remedy to the stupidity, drudgery, and inefficiency of repressive forms of reproductive labour that characterise female existence, and as a means of resistance to land speculation in and around Los Angeles. Heated tiles rather than carpets, the removal of the «scourge» of the decorative curtain and, most magnificently, a whole system of underground tunnels leading to a communal kitchen from which meals would be distributed, and towards which dirty dishes would be returned. Likewise, for the organised distribution of dirty and clean laundry.

Of her material feminists Hayden explains: «they wrote about the late twentieth century or the year 2000; they prophesied cooperative housekeeping in some future time when human relations were perfected». [6] The women who dreamed of Llano del Rio would not be the last utopian coalition to propose that successfully going «off grid» might paradoxically require the production of new infrastructural

connections. Viewed from the present, and a condition where dreams of the end of capitalism become caught up in brotopic fantasies of systemic collapse, material feminism offers a dream not of retreat but of extension: the material feminist, Hayden emphasizes, «wished to increase women's rights in the home and simultaneously bring homelike nurturing into public life».[7] Rather than an attempt to domesticate mechanization — an operation, following Sigfried Giedion's prescriptions in «Mechanization Takes Control» required to produce the open plan interior[8] — Constance and others staged a revolution based on making the interior of society itself not just survivable, but comfortable.[9]

THE BOXES WE LIVE IN
DISCONNECT US FROM ONE ANOTHER
AND THE NATURAL WORLD.

Geoship is a dome-building system that can be purchased in modular form, marketed not only on the environmental merits of its bioceramic materials (which, in combination with its fractal geometry, are claimed to «resonate biologically»), but its «cooperative village building model» whereby the company is run as a multi-stakeholder cooperative and «ownership benefits» are allocated to those who purchase the system. With a mission statement that concludes that «In the future we won't live in boxes,» the project — which at present exists only in the form of a website, the primary source for the present essay — deploys a Buckminster Fuller-inspired vocabulary («we want natural homes and a regenesis of spaceship Earth»), a neo-settler imaginary/imagery («our budding team is based in the Sierra Nevada mountains of California — gold country»), and a messianic vision that sees housing as resurrecting a crippled humanism («Humankind has evolved from a dualistic worldview that turns people against each other and disconnects us from the natural world, to one of connection and interdependence.»)[10] The Geoship vision evidences the dawn of a New Age prepper mentality within contemporary culture, not least in the wake of the COVID-19 pandemic, which pairs the sale of high-tech survivalist gear with narratives of autonomy and interconnectedness in an unstable present.

Models of co-living founded on withdrawal, escape, and automation are, we must remember, nothing new. Geoship inscribes itself in a history, whereby dynamics of rupture and connection are renegotiated by deploying a range of architectural and legal technologies, borrowed from other realms. Not least the technology of the dome itself. Felicity Scott tells the story of the Bucky dome as «an unlikely spatial template for the task of constructing new political communities in the late 1960s,» and yet, this is exactly where interpretations of his Geodesic dome were to be found.[11] Conceived by Fuller in the 1940s and patented in 1954, Scott tells the unlikely story of how «the official pavilion typology» of the American military-industrial complex, which spoke an abstract language of expansion was taken up by the counterculture as a «medium of social liberation» through hippie communes of Drop City in Colorado and others like it.[12] The dome was «an exchangeable component in a new type of postmodern system», Scott explains, and «functioned as a technology that, besides overcoming geopolitical and disciplinary boundaries, could also slip without opposition through ideological ones, circulating equally smoothly in both the mainstream and the underground press.»[13]

Scott's account traces a line from «The Dome Cookbook», written by hippie futurist Steve Bear in 1968 following a visit to Drop City, to the various editions of the «Domebook» (1970, 1972, 1973) produced by Lloyd Kahn, sub-editor of «The Whole Earth Catalog». This is a story arc that plunges from a state of hallucinatory optimism in the mid-1960s to a pervasive condition of toxic disillusionment in the early 1970s; it also reads as a checklist of issues that the speculative project Geoship has attended to. In particular, Scott highlights two major failings in this trajectory: first, the domes quickly proved impractical and unhealthy as living spaces — «new materials, from silicone caulks to ultraviolet-resistant flexible vinyl, were far from ecologically or biologically sound»;[14] second, the dome had lost its critical traction — «the form had become an end in itself... that no longer functioned as protest against the capitalist system.»[15] To these, we can add the persistent inequality of the division of domestic labour in many dome settlements, which saw women tasked with an undue amount of affective and manual labour in maintaining the community.[16]

Geoship's emphasis on non-toxic materials, participatory design charettes, and shareholder-based models of collective corporate ownership attend to the failures of older experiments and are resonant of memories of other communities. But what is the project that this 21st-century hippie revivalist architecture attempts to resuscitate? Does the apparent timelessness of this feedback loop in fact conceal a far more linear, heroic narrative?

YOU'RE A BEING OF LIGHT, WATER,
AND ELECTROMAGNETISM. DEEPLY
CONNECTED TO MOTHER EARTH.

The bodies that can be glimpsed through the ash-smeared windows of the ceramic huts at Geoship #62 are indistinct, blurred. It could be that the woman trekking toward her destination, arriving again and again, is not on the ground at all but hooked up to a sophisticated simulation machine. Open feedback-loops. Arrival, departure: eternal return. Learning only to dimly forget again, and again, and again.

Perhaps we have always already been cybernetic organisms, defined by our technologies, which now organise us at the scale of urban environments. The media theorist Orit Halpern alerts us, for instance, to ambitions concerning the smart city, by which we might understand any information augmented milieu, where the idea is exactly that the world is envisioned as interface, a sensory environment where inhabitant-consumers are affectively tracked, eye movement, temperature, heart rate measured, collated, cast forward in anticipation of the next environment to be composed.[17] Smart environments, such as we imagine the Geoship project is intended to be, manage human attention at a molecular level, track sensorial feedback loops between user and environment, encourage cyborg-netic participation.

Following the Macy conferences on cybernetics between 1946—1953, in a newly optimistic post-war moment, cybernetic theory articulates a point of convergence between biological, mechanical, and communicational systems. Intersecting with recent debates in posthumanism, systemic modes of analysis decentre the predominance of the human subject as a privileged node of meaning. Instead, «he» finds himself lodged amidst other actors in complex systems through which information flows and stops short, becoming a unit of information himself. When cybernetic thought is taken up by Gregory Bateson, who maintained a collegial relationship with Norbert Weiner, it is radically expanded to include both environmental and psychic relations: the basic unit of survival is organism and environment. The closed feedback loop of early cybernetic theory is cracked open, though the environment is not limitless in its relation to the organism. Bateson, and Félix Guattari after him, is keen to explain that local eco-mental or eco-subjective systems are hooked up with wider systems, taking up social and environmental relations.[18]

A closer investigation of those parties invested in the Geoship venture reveals the involvement of a diverse array (even a disarray) of characters, engaged in a range of entrepreneurial ventures with loose associations to a West Coast brand of hippie-cybernetic techno-optimism. Such partners include a range of architects and designers that can be assembled under the flag of biomimicry and biogeometry to a Portland-based group of placemakers and advocates for land stewardship models. Intellectual ties can also be established to Gaiain systems thinking, and open dedications are made to the influence of both Buckminster Fuller and chemist and spiritual wellness guru Rustum (Rusty) Roy. These relations are accompanied by links to Silicon Valley tech, through the early involvement of zappos.com, owned by Amazon. The diversity of these partners to some extent follows the «roadmaps» and alliances traced by earlier hippie communes, which linked capital with its critique, the Open Land movement with the Military-Industrial complex, and gender inequality with dreams of sexual emancipation.[19]

WE'RE ENDING THIS CYCLE
OF HUMAN SUFFERING.

Questions of social reproduction and labour remain «up for grabs» when the dome settlement is sold as a commodity to protean communities who will each negotiate their own relations to Gaia in a design charette led by a company representative. It is very unclear what forms of association will emerge in the electromagnetically shielded interiors of their dome houses, deep in the forested tracts of the West Coast of the United States of America. Geoship's website proclaims that the first test of a geodesic village will occur in relation to the task of housing the homeless in Las Vegas, through a project sponsored by the shoe retailer Zappos (owned by Amazon) and the Buckminster Fuller Institute. As such, its site of application as a biopolitical infrastructure will be the bodies of the most vulnerable and excluded members of society, framed as a «gift» from the richest (Jeff Bezos).

From a feminist perspective, and with the scholarship and writing of feminist colleagues like Felicity Scott, Orit Halpern, Laurie Penny and Dolores Hayden in our hiking backpack pocket, we must remain vigilant: when it comes to bare survival, even with the best of intentions, there persists an equal risk of creating sociospatial vulnerabilities rather than new modes of living together. These utopias are haunted by memories of great discomfort. And brotopic miscalculation.