Biomimetic Figurations in Contemporary Biohacking

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Although undeniably rooted in consumerist newspeak, the term 'biohacking' nevertheless designates a loosely defined yet rapidly expanding assemblage of therapeutic and self-improvement practices emerging at the intersection of self-tracking and alternative health cultures. Grounding its overarching approach in an empirical dataism inherited from its progenitor, the Quantified Self movement, biohacking incorporates a range of techniques from elaborate supplement protocols and experimental technologies like heat, cold, light, and sound therapies to blue-light blocking glasses – designed to filter disruptive wavelengths in the evening in order to support natural melatonin production..[1] Indeed, biohackers seemingly leave no stone unturned in their individualistic pursuit of psychophysical optimization.

While characterized by blatant techno-optimism if not techno-utopianism, assuming that this ethos introduces a radical rethinking of the relationship between **technology and nature** or, more broadly, of entrenched social structures such as **gender, race, class, or ability,** would be misleading. Instead, biohacking often rearticulates these familiar frameworks through a biomimetic imaginary – a suitably scientized vision that seeks to model human health and performance on idealized biological processes while remaining enmeshed in prevailing neoliberal narratives of individual responsibility and self-discipline (for a fuller treatment, see Lindfors 2024).

Biomimetic Figurations

Of course, invoking **'naturalness'** as an idealized state of health is inherently contentious; however, in this context, as an overarching vision, biomimesis—or nature imitation—carries multiple implications. Its figurations are fluid, changing, and shaped by an interplay of cultural, scientific, and ideological forces (cf. Dicks 2022). First, biohackers advocate for techniques and strategies grounded in ostensibly biomimetic logics, such as provoking the body's natural adaptive capacities through cold or heat exposure or consuming 'adaptogens' – plant-based substances with purportedly balancing effects (i.e., returning and restoring the body to its optimal state), usually derived from non-Western medical traditions (for the logics of restoration and optimization, see Derkatch 2022). One of the foundational concepts embraced by biohackers in this regard is 'hormesis', a principle from toxicology and pharmacology that suggests low doses of toxins or stressors can produce stimulating or beneficial effects. However, biohackers extend this idea well beyond its traditional application, elevating hormesis to a conceptual cornerstone for longevity claims and primitivist aspirations – e.g., to an instrument for regaining our mammalian adaptive abilities through progressive exposure to external stimuli from natural elements (as in Carney 2016). In this expanded form, hormesis becomes increasingly speculative and ideological. This is all the more evident when it is further deployed as a means for transcending modern 'soft' (in other words, 'liberal') lifestyles in favor of a resilient nature-connectedness – perhaps bolstered by variations of vulgar Nietzschean maxims of 'what doesn't kill you makes you stronger' (often carrying connotations of social privilege).

Second, the figurations of biomimesis within contemporary biohacking are hierarchically structured, privileging certain bodily ideals over others. At the core of this imaginary is an apotheosis of human bodily capacities – simultaneously techno-assisted while remaining rooted in primitivist ideals of raw physicality, heightened sensory awareness, and self-sufficiency.[2] This vision, while ostensibly cybernetic in its all-encompassing synthesis of nature and technology (see Modern 2021; also Dorst 2016), reinforces the implicit expectation of compulsory able-bodiedness (McRuer 2006), where individual autonomy is not only celebrated but demanded. As suggested by Rosi Braidotti (2013), such imaginaries also affirm a belief in the ultimate supremacy of the 'natural order', positioning technology as a mere tool for mimicking and channeling nature's (or in this case, the body's) inherent wisdom. Within this framework, technology is ultimately positioned as secondary – an analogical replication of nature's mechanisms, as when infrared light

1 Historically informed scholars may recognize these 'elemental' health technologies as echoing 19th-century European 'nature cures' renowned for their therapeutic appropriation of environmental elements (Alter 2014; also Whorton 2002).

2 Resonating with my use of this notion of bodily exultation, Ed Cohen (2008) has formulated the term 'apotheosis of the human body' in the context of immunological discourses of bodily integrity and defense.

therapies are framed as emulating the beneficial effects of sunset – while embodied knowledge and intuition are granted epistemic primacy. This underscores the need for scholars to critically examine how biomimicry is framed discursively, attending to the cultural and social logics that underpin its appeal.[3]

Contextual Re-Politicization

No doubt, many of the interventions and tactics promoted by biohackers are materially effective and may prove valuable for individuals seeking innovative methods for self-empowerment and well-being. Some of their efforts, such as advocating for the elimination of xenobiotics like glyphosate, also intersect with broader public health concerns and environmental critiques. Rather, my concern lies in examining the broader ideological imaginaries that are often embedded within these practices – dimensions that warrant both critical attention and case-by-case re-politicization. In embracing non-conventional and experimental methods for achieving well-being, often through a lens that seeks inspiration from 'natural' processes, biohacking provides fertile ground for intersecting with and, at times, channeling anti-modern or anti-progressivist currents such as conspiracism, anti-vax sentiments, and skepticism toward institutional expertise (e.g., public health measures).

Health and wellness practices, perhaps specifically those that trade on primitivist ideals of self-reliance and bodily autonomy, are also increasingly being co-opted by right-wing political forces. Not only are high-profile biohackers like Dave Asprey – the self-professed originator of the term – currently siding with US health secretary Robert F. Kennedy Jr. in his efforts to overhaul public health institutions, but this trend is also becoming evident in seemingly apolitical practices. Even cold exposure/swimming, a once-niche therapeutic technique favored by older Nordic women but now an internationally booming phenomenon, is part of this shift, with the Wim Hof Method – named after one of its fervent advocates, Dutchman Wim Hof – having begun to attract attention from the manosphere, signaling a subtle but growing politicization (see also Lindfors, forthcoming). (In Finland, I should say, it is still thankfully possible to take cold plunges without being viewed as a political actor!) Oftentimes, scientific rhetoric is employed by these groups as an ostensibly objective, non-political framework, helping to deflect suspicions of ideological bias, even as their practices serve to reinforce political agendas. Rather than attempting to depoliticize or shield such therapeutic practices from ideological co-optation, scholarship should instead pursue a contextual re-politicization by exposing their situated undercurrents so as to help prevent their uncritical assimilation into broader ideological struggles.

3 Another alternative to these naturalized hierarchies can be found in xenofeminism, introduced by Helen Hester (2018) and the international collective Laboria Cuboniks, which seeks to denaturalize essentialized notions of the 'natural' by reimagining technological innovation as a means of collective liberation and actively disrupting normative assumptions about bodies, ability, and nature itself.

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