

Flayed Bodies & the Re-turn of the Flesh: Foucault & Contemporary Gendered Bodies

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Foucault's genealogical approach to power is vital to understanding the historico-cultural contingencies of how the 'subject' as one who is (re)produced via discourse comes to be. In particular, Foucauldian approaches have been taken up by feminist theorists as a means for grappling with how the categories of 'woman' and 'man' work in terms of discipline and, latterly, biopolitical subjugation.¹ This article offers an intervention into the field of feminist Foucauldian theory with an attention to the body in the contemporary moment. In particular, we consider the interface between the body and the social via what we term *ingestible* somato-political technologies, and how these constitute gendered subjectivity. Such technologies go beyond the biopolitical internalisation of power structures: they are characterised by the literal consumption, absorption, and integration of social and political control. Through a focus on three *ingestible* sites of power (assisted reproductive technology or ART; nootropics; hormonal treatments for trans* folk), we propose that we are currently in a *pharmacopornographic* society. Such a society, we suggest has returned in many aspects to a fixation on the body as one which requires an externalising of its

interiors to make it 'knowable'; a characteristic of Foucault's discussion of sovereign power. This, of course, works in tension with the internalising impulse of ingestibility. For us, ingestible medical technologies – such as hormonal treatments and nootropics – produce the gendered body as host to micro-prosthetics which work as molecular 'slow' technologies. While power may work via swallowing and absorbing (internalising) such micro-prosthetics, such force simultaneously hinges on a concern with rendering particular gendered aspects of the body as external via an 'em-' form as either em-bodied and 'woman' and, what we dub, 'em-brained' and 'man'. This 'em-ness', for us marks a paradoxical body which is transitive but striving for an 'objective' whole(some)ness via the ingestion of 'scientific' medicine. What is at stake in our discussion is the persistence, and fleshiness, of the gendered body within discursive structures. This includes those which move from the somatic body to the 'mind' (or brain) as a set of manageable, plastic neuronal processes which prepare the woman's body and man's brain for an uncertain future, where bodily coherence is apparently paramount. Despite the fantasy of bodily – and gendered – unity still proselytised through contemporary medical discourse as ideal, the body's contradictory fleshy and extimate materiality remains.

The body is smuggled into the social world as a coherent, legible, and well-ordered object via discourse. Institutions of scientific knowledge – historically, and in the present – such as medicine and psychiatry, render this body an object, and the subject who 'has' it, visible and rational. This partitioned, corporeal site, is offered as an authentic, scientific, 'truth' as to a subject's identity – as healthy (or not); sane (or not), and, as a man or woman, or, latterly, some-body outside these categories. However, as Foucault's work shows us, there is no stable body knowledge, or truth. The body instead, is marked, imprinted, and traced on by histories and discourses which shift in terms of what is recognised as truthful. These histories and discourses are also unstable and contingent on each specific epoch's technologies of power. Foucault notes in *Discipline and Punish (DP)*:

Genealogy, as an analysis of descent, is [...] situated within the articulation of the body and history. Its task is to expose a body totally imprinted by history and the process of history's destruction of the body ... history leaves traces on the body.²

Rather than re-tread the substantive work on the early to modern and, arguably, post-modern regimes of power – sovereign, disciplinary, biopolitical – to which Foucault introduced us, we focus on the recent turn to what Paul B. Preciado dubs the *pharmacopornographic* regime.³ This regime is characterised by the intersection of

ingestible pharmaceuticals and the 'obscene' hyper-visibility of pornography as the mutually reinforcing forms of the contemporary era. Such a regime, we argue, is characterised by ingestible forms of power where technologies operate via an increasingly miniaturised and covert form. From assistive reproductive technologies to nootropics and so-called 'smart' drugs and gender transitioning medicine power is 'freely' ingested, inhaled, and incorporated into the body.⁴ The body and technologies of power dissolve into one another, becoming inseparably intertwined; becoming what Nikki Sullivan dubs *somatechnics*.

Before proceeding with our discussion of the *pornographic* logic of the *pharmacopornographic* regime let us offer a short definition of 'somatechnics'. Nikki Sullivan describes somatechnics as a form of bodily-being which is always-already technologised: "technologies (which are never simply 'machinic') as always already enfleshed".⁵ Preciado also riffs on the intersection between the somatic-body and, in his conceptualisation, the pharmacopornographic regime of power. For present purposes, this latter definition, of Preciado's, is key to configuring an understanding of how power operates in terms of *gendered* bodies in the contemporary moment:

[T]he first signs of the transformation of the somato-power regime in the mid-twentieth century was the electrification, digitalization, and molecularisation of these devices for the control and production of sexual differences and sexual identities.⁶

That is, for Sullivan and Preciado power is less located externally, in social sites and institutions, but penetrates the gendered body via micro-prosthetic forms of power. The ingestion of such power, as we will show, alters our bodies ('plastic' implants, silicon, microchips); our temperaments, moods, behaviours and relationships (over and under the counter drugs, selective serotonin reuptake inhibitors (SSRIs) mood stabilisers, lithium, benzodiazepines); our intimate relationships (phosphodiesterase type 5 inhibitors, or 'Viagra'); our sleep (cyclopyrrolones); and most importantly to this article: the social and 'biological' coding of our gender (testosterone, oestrogen, progestogen, antiandrogen). These soft, miniature, and dissolvable technologies and codes become integrated, incorporated and indistinguishable from the body: "the body no longer inhabits disciplinary spaces but it is inhabited by them".⁷

Somatechnics has made inroads in directing the Foucauldian field towards questions of how gendered power works. In particular, it is an approach which counters suggestions that Foucault's concern with discourse and language makes his work incommensurable with the material, fleshy body of gendered subjects.⁸ Nonetheless, somatechnics, even if we follow Preciado's radical uptake of the term,

presents some limits when considering contemporary materialisations of the gendered body. In particular, the ingestible modes of power which characterise the present regime depend on a rejection of unified fantasies of a somatic bodily whole – characteristic of the disciplinary and biopolitical body. Simultaneous with this ingestible form of power is a concern with the machinations of the body's interior as a set of discrete manageable, and gendered, sites. Such a concern hinges on an externalisation and visibilisation of such sites, demonstrative – yes – of a pornographic form, but also a (re?)turn to sovereign modes of power. The remainder of the 'fleshiness' is stretched out -- it refuses to disappear, to be forgotten. As we will show, a broken up, internal-made-external modality is requisite for the pharmacopornographic regime. Rather than wholly disappearing into discourse, the fleshy body returns, particularly via the trans* subject.

The body, as an artifact, is according to Preciado, a "technoliving, multiconnected entity incorporating technology".⁹ This management is carried out through new dynamics of technoscience, biotechnologies, biomedicines, and global media. Power has become miniature: microprosthetic mechanisms of power control subjectivity, cognition, and the body. Preciado writes: "Pharmacopornographic biocapitalism does not produce things. It produces movable ideas, living organs, symbols, desires, chemical reactions, and affects. In the field of biotechnology and pornocommunication, there are no objects to produce; it's a matter of *inventing a subject* and producing it on a global scale".¹⁰ In the microbiopolitical and pharmacopornographic era, the body is optimised through the intricate management of identity, cognition, and 'wellness'. Preciado describes pharmacopornographic power as the dual influence of the contraceptive pill (the pill) and *Playboy*; it focuses on the convergence of sex and pornography with that of psychoactive and pharmaceutical drugs. By arguing that pornography is the paradigm for all forms of cultural production in a post-Fordist era: he writes: "it sexualises production and converts the body into information [...] capturing the body's system of affect production",¹¹ in order for the accumulation of capital. Pharmacopornographic power turns the inside out, it seizes and externalises any 'hidden' internal processes. Like the sovereign regime, none of the inside is left unknown or 'sacred'.

The Gendered Body

This article comprises three overlapping sections which journey with Foucault and Preciado to consider the gendered body in the pharmacopornographic present. Through an attention to how micro forms of power work as ingestible, internalised

modes of regulation and reproduction of normative forms of power we show how cis-hetero bodies come to materialise; but also how trans* bodies might present a counter to this form. Thus, while we note that the biopolitical has always been anchored in the micro, capillary mode, we focus on the recent intensification of biopolitics around the production of gendered bodies as simultaneously interiorised and exteriorised. Further, as noted above, we are concerned particularly with *ingestible* forms of somatechnic pharmacopornographic power, and how this hinges on a revelatory, externalised, splitting, or breaking apart fantasies of unified gendered subjects.

Building on significant work already completed by feminist scholars on contraceptive technology, we begin with a focus on the recent shift towards the self-enterprising, reproductive woman-citizen through a discussion of 'Kindbody'. This is an all women-led start-up company that specialises in women's fertility and 'wellbeing' via incremental and 'micro' forms of fertility management. Here penetrative assisted reproductive technologies (ARTs) and ingestible hormones work to re-produce an *em*-bodied woman subject.

Next, we shift to consider contemporary forms of the masculine body as also produced via micro-biopolitics. We track the larger than 'life' figure of Eric Matzner, a self-proclaimed transhumanist and biohacker. Through an exploration of his microdosing nootropics we present his attempts to 'hack' the finitude of the human body and 'upgrade' his mind as masculinist preoccupations. We dub this form of mindful masculinity 'em-brained'.

In the final section, we propose that -- despite the micro formations of bodily objectification as a site of self-management -- the 'fleshiness' of the human subject persists. While this might herald cries that to turn to the flesh one veers from Foucault's discursive imperative; we contend that the figure of the trans* potentially manifests the artful form of bodily autonomy offered in Foucault's later work.¹² Here, we *re*-theorise the body that has until this section, been subjugated by somatic and neuronal technologies. We ask, what happens if these technologies are seized, repurposed, and re-articulated *by* and *for* the subject?

The Body Flayed...

Foucault's critique of Hobbesian sovereignty is well-trodden ground. For present purposes we note that Foucault, and those who have used Foucauldian approaches (Friesen & Roth, 2014; Lilja & Vinthagen, 2014; Taylor, 2011) to critique sovereign power, emphasise that the spectacularisation of an annihilated (flayed; broken; decapitated) criminal and or diseased body was considered the most brutal form of

punishment and deterrence in the pre-modern era. The ideal body, then, and through Kant onwards, was presented as whole(some), unified and, importantly, *knowable* via scientific discourse. Such knowability, as Foucault details, particularly in *The Birth of the Clinic (Clinic)* and *DP*, rested on a simultaneous dissection and classification of internal bodily particulars into visibilised, organs, and circulations as the site for the production of the modern subject. The knowledge which such anatomical and scientific practices produced provided support for discursive designations of the normative, and its inverse non-normative form, as subject positions which, as Foucault argues, operated as a form of subjugation. It became imperative, particularly from the disciplinary regime onwards, for the subject to integrate these discrete parts to form a whole-body externalised as an articulable, discursively coherent, subject position. A reference to the Boston Women's Health Collective's 1970s feminist text *Our Bodies / Our Selves* is illustrative. To know one's body – as a series of womanly parts – is to know oneself, in this case as a woman-subject. The writing of 'woman', in medicine, and even in radical feminist polemic, unifies matters internal as a unified whole self. With the shift to a unified body as a touchstone for subjective (re)production the sovereign regime might appear a distant, gory, memory. However, it is vital we look at Foucault's 'regime-ification' not as a teleology of discrete periodisation; rather, as he notes in *Nietzsche, genealogy, history* genealogy always bears a mark.¹³

As we will show in our case-studies below, sovereignty's traces did not disappear with the advent of disciplinary, nor biopolitical, power. In particular, the modality of sovereign power operates through exposure – the interior body is mapped and managed for the production of a healthy, externalised public. This remains significant, particularly in the pharmacopornographic regime, where subjects are encouraged to spectacularise their body as a series of manageable 'objects' on social media and elsewhere.

Did the Body Disappear?

Foucault's work, particularly from *DP*, is often thought to trace how, with the decline of sovereign power, the body as a spectacularised site becomes less crucial to how power operates, and subjugates. That is, first with the rise of the prison (and disciplinary power) and, later, with forms of liberal governance (and biopower), the body – no less subjected, as we shall see – recedes, or even disappears; replaced with the subtle, precise, and diffuse tactics used to discipline the 'mind'.¹⁴ Under biopower, and, latterly somatechnics, power has become internalised, covert, opaque, quiet and smaller in scale, but not necessarily in intensity. With this, the body

becomes so enmeshed with somatic techniques and technologies that its materiality apparently diminishes. No longer consisting of a bloodily demarcated, discretely organised, fleshy and material interior and unified exterior, the body and somatic technologies dissolve into one another. For somatechnics, this dissolution is into the various prosthetic 'stand ins' for the body – the medical and social technologies onto which the body is displaced. The body, at least via some less generous readings of Foucault, also disappears into discourse. We would not go quite so far; however, we would concur that discourse *and* somatechnics are key to *holding together* the body in a pharmacopornographic society; as we will show, particularly the gendered body. Rather than by their family name, or feudal position, the modern, then post-modern subject is marked out via medical and social discourse and its related technologies. Foucault highlights in *DP*: "each individual receives as his status his own individuality, and in which he is linked by his status to the features, the measurements, the gaps, the 'marks' that characterise him and make him a 'case'".¹⁵ Or, we could say – and many feminist Foucauldians have already said, that such a constitution of the subject's status in medical, and social discourse, make them a 'gender'.¹⁶

Sexual difference, as 'normalcy' or 'perversion' was first elevated as an anatomical category in the late-nineteenth century. Gender as a signifying index, discursively formed, was 'invented' in the mid-twentieth century by behavioural child psychologist, John Money and his colleagues Joan and John Hampson. Money and the Hampsons are widely credited with coining the constitutive, category of 'gender roles' in the 1950s. Such roles – as man, woman or some-body else, presented gender as a psychologically distinct identity to that of biologically given sex. The notion that gender resides within one's psyche, and the subject's articulation of such, was solidified in the inclusion of various 'gender disorders' in the *Diagnostic & Statistical Manual (DSM)* from 1980 onwards.¹⁷ The designation of the non-normative or dis-ordered subject as an object lesson for the production of normative, ordered – and unified – subjects is discussed throughout Foucault's work. In *History of Sexuality (HoS)* particularly, he shows that the discursive production of the homosexual subject, for example, worked at least partly to shore up the primacy of the heterosexual. So too with gender, the presentation of the variously designated 'transsexual'; 'transgender' and then the categories of 'intersex' operate to affirm the normativity of the cis-subject. Even in the present context, in most Western countries, one's symptoms must tally with 'gender dysphoria' described in the *DSM V* and diagnosed by a psychiatrist, before legal transitioning begins.¹⁸ In this way, the gendered individual is quite literally written into existence through clinical investigation. The 'body as gender role' discourse becomes an object – artifactual.

'Its' psychiatric record or file stands in for its corporeal presence. Analogous to the early modern practices of anatomisation, the medical gaze surveys the body and makes it transparent – but only in regards to the 'mind', where such 'dysphoria' is apparently at odds with the flesh.¹⁹ The body recedes. Indeed, the psychiatric rationalisation for medically-led transitioning hinges on a unifying promise – that the body will soon match with the mind. Further, and this demonstrates the biopolitical impulse around gender (re)assignment, such intervention and positioning of the 'dysphoric' body is also seen as life-affirming. For the trans* subject, held hostage by the biopolitical formation of the contemporary clinic, the articulation of one's subjectivity as a matter of life and death is quite literally vital.

Aside from the non-normative body-objects produced via medical and psychiatric discourse under the biopolitical regime, the cis-normative 'woman' was, and remains, similarly produced. A short discussion of the historical role of the contraceptive pill presents a neat example of biopolitical imperatives, and the shift towards the pharmacopornographic which we explore in depth below. The pill demonstrates the biopolitical concern with the body populous (social body) through the self-regulation of 'private' individuals. Further, the pill's function as a way of managing one's reproductive capacity, means it adheres to the biopolitical imperative to foster life. Life here, refers to the socially accepted norms of 'good' population management which upholds the heteronormative social order via the management of women's fertility within the institution of the nuclear family.²⁰ Importantly, the pill works as a somatechnology – an *ingestible* prosthetic, with the power to simulate the previously thought to be determinisms of the body's anatomy. The pill produces a displaced physicality with its rendering of menstruation as artificial. Preciado sardonically refers to this as a 'technoperiod' which mimics and induces the normal physiological cycle; a technological "biodrag".²¹ The cis-woman must imitate being a woman in order to be properly (re)productive.

Such 'dragging' of the woman-subject through the ingestion of the pill may indicate, if not a disappearance, a displacement of the woman's body. However, it is worth noting that, as with the constitution of the non-normative dis-ordered gendered body, the pill also operated to position the body as subordinate to, or in some cases at odds with, the mind. In particular the pill, in historical, as well as contemporary advertising offers a technological solution to the presumed 'forgetfulness' of the woman's mind. David P. Wagner, a product engineer and husband of an Enovid user, designed the first circular dispenser in 1963. Wagner, who did not work in the pharmaceutical industry, designed the first pill administration device out of worry that his wife, Doris, would forget to take her daily pill.²² Once released, all subsequent birth control pills came with a type of memory aid. The

memory cues baked into the design of contraceptive pills invoke the idea of a 'forgetful woman'. Whilst it is ostensibly her mind that forgets, *what* she forgets is her body.

For Wagner, and pharmaceutical companies since, the woman's body is rendered a mere appendage which can be biopolitically managed via the somatechnology of the pill, now dispensed in packets resembling a calendar. The woman who forgets to account for her body is the ideal pill consumer. A 1969 advertisement for a 28-day supply of contraceptive and placebo pills called 'Serial-28' featured in the Canadian Medical Association Journal, with the title: "Now you can give her a 'pill' that really counts for her". The copy reads: "the tablets are taken daily, every day. So the problem of forgetfulness is simply removed". Rather than the woman receiving a "pill" she can count *on*, the "pill" counts *for* her.

Perhaps, here, the gendered body is less disappearing than forgotten, saved by the remembering of the somatechnical apparatus of the pill. Further, the pill promises to fill the gap left by a woman's presumably natural lack in memory, offering to unify the mind and body to produce herself as (as the Enovid copy from 1963 asserts) "unfettered" by "aberrations"; she is "normalis[ed], enhance[d]" by medical science.²³

Em-Bodied and Em-Brained

In *The History of Sexuality*, Foucault argues that the West has placed a never-ending demand on extracting 'truth', and from the late eighteenth century onward, sex and sexuality has become the site where this occurs: "it is up to sex to tell us our truth".²⁴ As outlined above, the emergence of gender roles reconfigured the sexual order of things. While sex lay under the sway of medical science, it became the question, and answer, to bodies which are forgetful or disruptive. With the pill, sexual order, reproduction, social order, and life itself is biopolitically managed. However, as we highlighted above, the mind, and memory of the women are also managed and regulated by the same technologies; often via an assumed displacement or 'forgetting' of the (woman's) body. Apparently, rather than controlling the body's physiology, gender as a 'role' does the job of disciplining femininity and masculinity as it is 'located' in the 'mind'. Normative femininity and masculinity ensure the continued expansion of the species-body via reproductive sexuality. Preciado describes the introduction of gender as a, "technical, visual, and performative device for sexing the body", which reorganised the individual from being either hetero- or homo-sexual to exhibiting either a masculine or feminine "mind".²⁵ While the man-as-mind is not a novel assumption, and in fact underpins much patriarchal discourse,

the move to womanliness as primarily mindful presents a new form of gendered subjectivity, characteristic of the pharmacopornographic regime.

We consider this context through the prefix 'em-'. This little modifier works to indicate a kind of distancing between the subject and the noun or verb to which 'em' precedes. Its etymology indicates 'putting something into or upon' the noun.²⁶ Let us consider the importance of 'embodiment' to feminist theory. Oddly, it is usually elided with a phenomenological approach which implies a direct relation to the body-as-flesh rather than the body as a site where, as subject to an 'em', it is put upon by 'body-ness' as something external. For this discussion we want to emphasise the embodied subject as one whose 'body' is put upon or into; in particular that body-ness is manufactured via ingestible and / or internalised somatechnologies. Our conceit of applying the same 'em' prefix to the brain implies the same distancing and processuality of the production of the 'embrained' subject as one who absorbs / ingests and internalises brain-ful somatechnology. We chose 'brain' here, rather than 'mind' for stylistic reasons, but also – and this is important – with the rise of the mindfulness movement, and market, mind and brain elide.

Further, 'em' speaks to the imperatives to expose both the body and brain as sites of 'truthful' gendered identity, characteristic of the *pharmacopornographic* regime. Preciado notes that this regime relies on the obscene visualisation of the formerly 'private' – particularly the sexual. The production of the body via somatechnology is, paradoxically, hyper-visible while the very technologies (pills; gels; ingestibles) made to produce such bodies become smaller and less visible.

Kind Em-Bodiment

The pill, externally synthesised in the lab, has been internally integrated into the body as a biopolitical technology since the 1960s. From the 1980s, a new host of assisted reproductive technologies (ART) manipulate reproduction *in vitro* (outside the living body) and *in vivo* (inside the living body) through IVF and egg freezing (EF). While ART arguably constitute, and fixate upon, the woman-subject's body; the impetus of IVF and EF as a form of life – and future life – as a site of careful and medically intervened upon 'mindful' management is crucial. With ART, the woman's body is segmented and objectified into reproductive parts – which become sites (and sights) of pharmacological and medical intervention. Such objectification works as a form of exteriorisation of quite literally one's 'private' body. This fits the pharmacopornographic which Preciado outlines. However, ART, too, also demonstrates a seemingly contradictory movement towards 'em-brainment' via smart bodily management as constitutive of a unified, fulfilled woman-subject. This

works particularly through the temporality of ART – its future-focus. This view towards potential bodily failures (particularly with EF) requires a mindful, rationalised, planning ahead for ensured fertility. Thus, as we will show, ART entrepreneurs offer their services as the *smart* choice, for one's body, and the future bodies which one may produce.

We illustrate this through a discussion of 'Kindbody', an American all-women led start-up that specialises in fertility treatments and "360 whole person wellness".²⁷ Kindbody is part of the lucrative, deregulated neoliberal, globalised market in women's reproductive services.²⁸ In places such as the United States, it has become common place for multinational companies to subsidise and cover EF as part of their health insurance, insomuch as the practice is referred to as 'social freezing'.²⁹ Private companies like Kindbody reinforce that women's bodies, reproduction, and futures are worth 'investing' in. Fertility is proactively 'managed' and future proofed by the women who 'choose' ART and the companies which provide it. The aging woman's reproductive body is managed for its risk of anticipatory future infertility, and women who social freeze or are disciplined as 'lifestyle freezers' are celebrated for their agency.³⁰

Kindbody's slogan – "Own Your Future" – speaks directly to the future focus of ART. By using predictive technologies and specialised data-driven testing, start-ups like Kindbody use reproductive health data and metrics to personalise and estimate customer's future reproductive chances. To "Own Your Future" is to be smart and to self-invest for potential enhanced future returns, just as one invests in speculative markets.³¹ It is not only patients that invest and "own" their future, but equity and private investors, shareholders, and employers. Kindbody operates on a *Lean In* feminism type of logic which offers its services as an informed and empowering 'choice' of fertility management and reproductive 'freedom'. According to the company, their "data-driven" cloud-based electronic medical record (EMR) gives Kindbody, "technology that accelerates its plan to democratise women's healthcare, starting with fertility and wellness [...] by using clinical data to inform new workflows and predictive protocols".³² The portal not only efficiently 'manages' but 'predicts' the healthcare and wellness of patients. Co-founder, Joanne Schneider, explains: "We are rethinking how decisions get made, and giving technology and data a central role".³³ The formation of a centralised and standardised healthcare network works to bring together both marketing, predictive analytics, and user 'experience'. The patient's fertility is mediated through both reproductive technologies and dataified through the cloud. Furthermore, by infusing hospitality into biomedical care, Kindbody presents fertility as a smart, informed lifestyle choice, rather than a

reproductive option. This is clear in the copy of a recent Instagram post (see figure 1):



Figure 1: #familybuilding as an informed choice at Kindbody (Kindbody 2022).

To build one's family (#familybuilding) is a matter of informed, choice, or knowing one's 'options'. Options here depend on a knowledge of one's em-body — through the mediation of Kindbody's data-driven medical intervention. However, as Kindbody emphasises throughout its website and social media content, the 'mind' is also vital for 'owning' one's future and achieving what they dub "the whole you". A section of their website – under 'holistic health' – is dedicated to "whole person treatments" with a focus on "mental health".³⁴

Fertility benefits and care are represented as providing many different options for individuals; however, it only provides one, socially sanctioned way of achieving a '360' — or whole — version of the self, via an embodiment premised on both managing one's fertility, family and career. This is offered as the smartest, most informed "data-driven" decision for the woman-consumer-subject. Part of the "whole you" offered by Kindbody are counselling services which promise to assist Kindbody customers in achieving a 360 self. Some clearly intersect with Kindbody's core

business of ART, EF and child-bearing (Pelvic Floor Training and Doula Services). However, 'Return-To-Work', and 'Nutrition', 'Coaching' as well as 'General Counselling' emphasise "integrating physical and emotional health" to "optimise" one's balance.³⁵ These services are offered, like ART and EF, as a means for securing one's "future": "Sessions are designed to empower patients to move through change and transition with clarity and confidence, which helps them to feel in control and grounded moving forward".³⁶

The technology Kindbody employs does not use transplants and prosthetics, rather they employ tissue engineering which multiplies living cells *within* the body; *in vivo* and *in vitro*. The body multiplies within itself; it becomes the very technology that enhances, saves, and prolongs life – like an Ouroboros, continually devouring and endlessly returning in its recreation of itself. Kindbody sells the experience of being an empowered individual that controls and "owns" one's future via engagement with their holistic suite of services.

Em-bodiment as a type of body-building project, where the subject inputs 'body-ness' via ART, EF and IVF is apparent in the Kindbody example. So too is the requisite 'em-brainment' where the savvy woman-consumer is encouraged to base her approach to the company's services on 'mindful' decision making. This kind of artful production of the 'whole you' as a site of care-full practice tallies with Foucault's later work.³⁷ But let us return, too, to Preciado and the pharmacopornographic elements of this process. Arguably, em-ness is a form of externalisation in its prefix function; it lays the work of its suffix bare. In the Kindbody case, em-bodiment and em-brainment work to double the woman-subject as one of bodily internal inevitabilities ("age matters when it comes to fertility"³⁸) and as mindful consumer who effectively manages such inevitabilities. This em-work requires an externalisation of previously private matters —via the articulation of sexual and gender 'information' requisite for Kindbody's "data driven decision making"; the projection of one's fertility via graphs and artifacts which determine one's services; and the 'confession' requisite for its counselling services (see figure 2). But we can also see a return to sovereign modes of revelation of bodily parts and 'private' experience as proof of one's gendered subjectivity via the everyday public sites of social media. Importantly, such exposure of the subject's interface with pharma- and soma-technologies, offers a fulfilled, wholesome woman-subject as ideal —but only produced via an em-bodiment which sees (and presents) the body as broken up into a series of parts. Kindbody's social media demonstrates this externalisation. Instagram posts on topics such as fibroids; eggs; and the uterus offer scrollable info-carousels which include hashtags such as #KnowledgelsPower (also visible on their Facebook page, see figure 3) – a similar logic to the *Our Bodies / Our Selves*

described above. However, the customer testimonies —a more and more mandatory form of subject formation via self-declaration are particularly demonstrative. Under 'Patient Journeys' on the Kindbody website potential customers are told that "Our Stories Are Our Power" and that "open, transparent and real" narratives are also a part of future proofing one's womanly subjectivity: "It's by sharing our own stories and beliefs in a better future that have helped us find strength and the drive to continue to broaden the fertility conversation".³⁹ While an in-depth analysis of particular posts is beyond the scope of this article, it is worth noting that the imperative to *share* as a form of proof-of-self-concept but also as proof of self-care is a key part of Kindbody's marketing.⁴⁰ Briefly, we can see this in a 2021 interview with Kindbody IVF customer, Meghan.⁴¹ She shares her "struggle with creating life" and the lack of "care" from her first (non Kindbody) obstetrician. Meghan's story-telling works as a form of exposed em-bodiment. She becomes a "handful of embryos"; a uterus and a series of "retriev[ed] eggs". Further, she frames the process as informed – a type of em-brained choice. Meghan explains this as a form of "magical" comprehension or understanding of reproduction which sets her apart from others: "It was a magical moment to watch my baby get implanted in my uterus. ... I feel sorry for people who don't need fertility treatment because they can never comprehend what I or others went through".⁴² Following Preciado's insistence that the pharmacopornographic not only exposes the 'private' body (watchable from a distance as she is "implanted") but also one's affects as objects for circulation on the market, Meghan articulates a series of emotions: "I knew in my gut; I had to go to this fabulous clinic! ... I was terrified and frustrated ... The journey can be incredibly lonely ... I am very proud of myself ... and not ashamed."⁴³ (ibid.). Interestingly, Meghan articulates the 'em-'form in her reference to herself in the third person – the object of smart, scientific intervention, in the same breath as her affective descriptions: "I am proud of my body, and not ashamed that she needed a little help from science". We see here the intersection of em-bodiment and em-brainment where science completes what lacks in the body: "I share with everyone (even strangers) that we got our miracle baby via IVF – I never leave that out ... never!". Moreover, requisite to this em-process is that it is shared and externalised, "After all", Meghan states in a banalised Foucauldian maxim, "knowledge is power".



Figure 2: Kindbody relies on “data-driven” graphs and informative carousels on its social media (Kindbody 2022d).

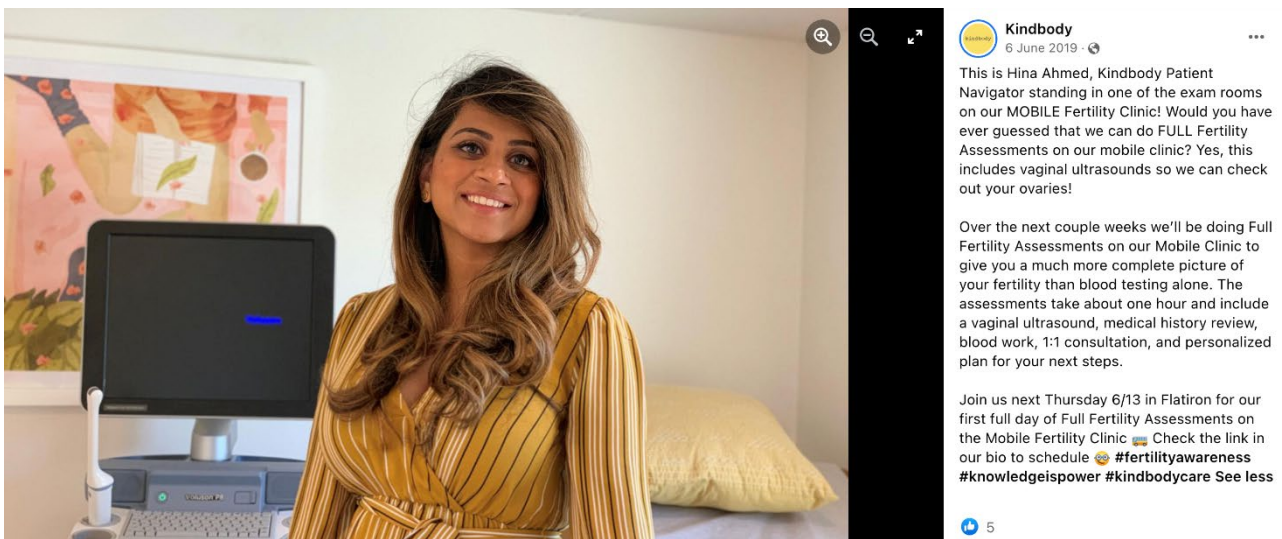


Figure 3: A post on Kindbody's facebook page. Note the hashtag #knowledgeispower (Kindbody 2022e).

Nootropic Em-Brainment

“Embrained”, plasticity and the healthy ‘well’ ‘being’ shifts from the problematised corporeal women’s body, to the mind, or brain of the masculine subject via the rise of ‘smart drugs’ or *nootropics*. This section explores and consolidates the current pace of neoliberal biomedicalisation and masculine practices of ‘brain health’ self-care. Like how Kindbody is marketed as a form of future-proofing for the woman-subject, such ‘smart drugs’ are offered as a *mindful* choice for men. Here, we also scrutinise the ‘neuroscience turn’ and how ideas of brain plasticity reinforce hyper-individualisation, responsibilisation, and the production of a ‘neuronal’ man-subject. The embrained subject rests on this turn – circa the late 1960s – and theory of the brain as ‘plastic’, that is that the mind is manipulable via scientific intervention. *He* is primarily conceived of in terms of neurochemicals, and as such ‘brain health’ becomes another form of self-care, responsibility, and duty of biomedical citizenship. The concept of plasticity works to produce the brain as a resource. Much like egg freezing, brain plasticity is often articulated by discourses of ‘future possibilities’; biological investment depends upon speculation and selling a “vision of the future”.⁴⁴ This section analyses the marked ‘maleness’ of nootropics and the association of the mind with Man, by looking at the ongoing miniaturisation of ingestible somatechnologies that dissolve into the body and act through the ‘mind’.

Masculine selfhood here is understood through neuronal terms. More specifically, masculine self-care is enacted through managing, enhancing, and optimising one’s neuronal self. (Hyper)masculinity, wellness and self-care may seem discordant at first. However, there has been a marked shift in ‘wellness culture’ which is no longer solely characterised as a feminine pursuit or duty.⁴⁵ This operates alongside the rise of neuroscience, via a parallel “do-it-yourself” brain stimulation movement growing since the 2010s, in which “home users” stimulate their own brains outside of medical settings.⁴⁶ This movement overlaps with ‘biohackers’, ‘lifehackers’ and ‘neurohackers’ – terms which were once reserved for the DIY biology practices Silicon Valley entrepreneurs undertook but have since become an everyday ‘lifestyle’.⁴⁷ This has made the amorphous and experimental lifestyle practices of ‘doing-it-yourself’ and ‘biohacking’ become increasingly popular among liberated entrepreneurial subjects. As Hilary Malatino explains: “The primary target for [the] adventure in do-it-yourself superhumanity is found in niche demographics dominated by bourgeois men”.⁴⁸ Like the enterprising women discussed in the previous section, economically privileged men turn their cognition into a site of investment.

However, rather than strictly taking Descartes' (caricatured) objectivism and mind-body split as the foundation for all patriarchal epistemologies; here, we interrogate how his vision can be translated to contemporary pharmacopornographic concerns. We take Descartes' work as a loose scaffold in understanding how optimising one's 'brain health' folds into the exposure-based logic of 'wellness' and self-entrepreneurialism via the contradictory absorption and internalisation of ingestibles. We question the ways in which reaching optimum cognitive capacities is largely enacted through a particular type of 'maleness'; it is difficult to untie the privileged positioning of masculine (disembodied, immaterial) from the denigrated feminine (body, material). More specifically, we correlate Cartesian ideals with the current turn to neuroscience and what Victoria Pitts-Taylor refers to as 'neurocentrism', where "the brain is conceived as foundational of many aspects of human nature and social life and where the ability to know key truths about the self and the social are dependent upon developments in neuroscience"..⁴⁹ Brain 'types' and gender and sex differences are integral to this neurocentric culture, or what Cordelia Fine has coined as 'neurosexism'..⁵⁰ Neurosexism is the widely perpetuated myth in neuroscience (and society more broadly) that there are invariable, hardwired differences between the female and male brain..⁵¹

The case-study we use to illustrate this revolves around a single, compelling figure: Eric Matzner. Matzner is a self-proclaimed biohacker, futurist, transhumanist, and founder of 'Nootroo', a company that produces "The gold standard in Nootropics" (Nootroo, n.d.). He presents his ingestion of smart drugs and adherence to what he posits as a neuro-scientifically optimal lifestyle as a form of desirable entrepreneurialism. Like Kindbody, Matzner offers a means for 'owning one's future' via internalised medical intervention. His slogan is "End Aging, Or Die Trying" (see figure 4). Averse to dying, Matzner enacts a hyper-responsible form of biomedical citizenship by engineering, modifying, and selling substances that optimise one's neuronal and biological life. We demonstrate that the targeting and marketing of nootropics works to integrate the male consumer into the circuit of self-care. Self-care and wellness have discursively been marked as a feminine practice, however, optimising one's 'brain health' opens these practices up to em-brained self-entrepreneurial men.

ERIC MATZNER

Climitigation Project Vesta Nootroo Futuri.st MBL Contact



Figure 4: Eric Matzner sporting his trademarked tee-shirt: END AGING OR DIE TRYING. (Matzner 2019).

There are differing accounts of what the word 'nootropics' means. Saniotis claims it derives from the Greek word *nous* (mind) and *trophos* (to nourish).⁵² Whereas, the father of modern nootropics, Corneliu E. Giurgea explains the definition as *noos* = mind and *trophein* = towards.⁵³ In their contemporary incarnation, nootropics range from synthetic biomedicines that boost concentration, memory, cognitive and learning skills, motor skills, and mood and affect, to natural Ayurvedic herbs or 'holistic enhancers' and supplements such as brahmi, ashwagandha and bacopa monnieri, and adaptogenic fungi like lion's mane, reishi, and chaga mushrooms.⁵⁴ Due to the purported lack of toxicity and pharmacological effects, nootropics began to be popularised and referred to as 'smart drugs' and 'cognitive enhancers'. Moreover, the neuro-enhancing and memory enhancing properties make them increasingly popular among students ('study drugs') and Silicon Valley-types.⁵⁵ Rather than targeting particular types of neurons, as with other psychotropic and psychoactive drugs, nootropics activate the integrative activities of the brain. Nootropics targeted activity acts selectively "towards the mind".⁵⁶

Efforts to "make the brain better" as a form of "cosmetic neurology"⁵⁷ indeed echo a Cartesian ideal. Instead of references to therapy and wellness as we saw with Kindbody, nootropics draws on the language of enhancement and 'hacks'. The enhancement of 'normal' abilities is championed by biohackers, neurohackers, lifehackers, and transhumanists alike. Thus, nootropics works as a growing, but still 'alternative', branch of mainstream neuroscience and theories of brain plasticity. Further, we can link this to a form of biomedical neoliberal citizenship which

Malatino describes as “fully invested in Western technoprogressivist fantasies of transcending the limitations of the human body, in overcoming (through medical, technological, and nutritional means) disease, frailty, weakness, and – ultimately – human finitude itself”.⁵⁸ This works, particularly in Matzner’s case, via *biohacking* – the practice of manipulating one’s biology through engaging in biomolecular, technological, and medical advancements. Biohacking, like transhumanism, is underscored by a ‘right’ to corporeal sovereignty. By ‘investing’ in one’s superhumanity, the body and mind are tweaked to perfectibility and what Malatino calls “deathlessness”.⁵⁹ Becoming a self-expert in one’s own neurology is not only a democratic freedom, but a duty. This duty is not chiefly personal however, it is framed as a responsibility for ‘humanity’ as a whole.⁶⁰

Let us move to Matzner and an analysis of a short video posted to YouTube, titled ‘How to Live Forever: The Morning Routine of a Biohacker’.⁶¹ Matzner is in bed. A spherical alarm beeps and he jumps out of bed wearing a T-shirt with “End Aging, Or Die Trying” printed on the front. Matzner asks his Amazon Echo, “Echo, what is the weather?” while the words “He wants to be productive and live forever” flash across the screen. Matzner then walks to his lounge and thumbs through his large makeshift medicine cabinet; a shabby old bookcase that holds numerous different pill containers. He introduces himself: “as a techno-optimistic futurist, I believe in technology to solve the problems faster than we’ve created them -- and one of those problems is death and aging and [the] decline of our brains”. Listing off some of the 50-60 supplements and nootropics he takes daily, Matzner unscrews the lids off the containers and adds them to a large pile in his hand, before swallowing them and instructing his Echo to “start a seven-minute workout”. After working out, Matzner checks his heartrate on his smartwatch and goes out to his balcony where he attaches a sensory device to his head and schedules a three-minute meditation. Once finished, he checks his phone, which is attached via Bluetooth to his sensory headset and declares: “66 percent calm”. He smiles and looks out to his view of San Francisco’s Bay Area and explains: “I’m physically calm, but now my body is activated for the day”. We then move to the office. While hurriedly typing on his keyboard to enter in the address of a speed-reading website, Matzner’s temporal obsession, or anxiety becomes more obvious when he spits out in a flurry, “I know, here, that I have a limited amount of time, and the faster I talk, the faster I read, the faster... the more information in my life that I can learn”. Matzner’s own nootropic ‘Nootroo’ supplements, feature among the pills he consumes in order to live faster, while hoping to combat the ‘problems’ of brain decline, aging and death. The biohacker’s fantasy of overcoming aging and death draws him to consume the soft, miniature, ingestible technologies in a hope that they will adopt the form of his body,

controlling it and becoming part of it. Matzner's attempt to 'hack' the finitude and fragility of his body by enhancing and upgrading his mind is further evidenced in the 'About' section on his personal website, where he writes:

Eric is trying to live indefinitely ... His body is less of a temple and more of a laboratory and workshop for pushing the limits of the brain's cognition, memory and learning ability. He also experiments with cutting-edge human lifespan extension and rejuvenation technologies and strives to make continual, incremental improvements towards optimal performance.⁶²

Matzner's fantasy and goal mimics the Cartesian ideal; once his brain / mind is abstracted from the rest of his body and 'hacked' for optimum efficiency, it will function independently from his body as a disembodied *smart* agent. Like the Cartesian soul, even after the destruction of his body, his brain could potentially still independently exist. Like Meghan's testimony for Kindbody, Matzner's subjectivity is presented in em-form; he is discussed in the third-person.

Matzner describes his brain and cognitive capacities in terms of a limitless potentiality; they are untapped and can be mined for their boundless resources. Biohackers, such as Meghan and Eric, obtain their superhumanity through private means: they are the ideal market-based healthcare consumers. In the neoliberal model of health, one even becomes responsible for aging. By putting his 'underemployed' brain cells to use, Matzner's brain undergoes 'workouts' or acts of neuronal 'fitness' – he must stay agile, flexible, and active. Pharmacological modulation and brain 'workouts' allow him to take responsibility in attempting to solve his "individual, somatic problem".⁶³ This is reflected in Matzner's engagement with 'supertasks' – touted as forming new modes of thought and synaptic connections. Matzner's website declares: "Eric reads at over 1000 words per minute (using RSVP software), listens to books at between 2-3x, can type over 150 wpm (and is ranked in the 99.9 percentile of fastest typers as per typeracer.com). But he is always trying to go faster, so if you have any tips, send them over!"⁶⁴ These 'supertasks' both quantify Matzner's abilities and self while strengthening his neural connections, which for him, will ultimately "End Aging", or at the very least, he will "Die Trying". Em-brained subjects like Matzner are also culpable of doing harm to their own brains and must work doubly hard: against becoming neurologically deficient *and* towards optimal efficiency. Nootropics sell the fantasy of total control over one's brain, individual body, but also the external world; they provide a means for transcending biological limits.

This transcendence, where the biological, tired, burnt-out body is exceeded, is exemplified through both the language and imagery used in Nootroo advertisements. In the 'Nootroo: SmoothCaffeine (Green)' campaign, there is a brain imaging map which shows the brain with and without one of the main nootropic ingredients, L-theanine, as seen in figure 5.⁶⁵ Matzner has taken the image from a neuropharmacological study titled: "L-theanine, a natural constituent in tea, and its effects of mental state".⁶⁶ The study used sixteen participants (11 female, 5 male) in the L-theanine group, and nineteen (12 female, 7 male) in the control group which consumed a placebo of water. The image shows a top view of the brain and uses an electroencephalograph (EEG) to measure the brain's alertness. The alertness is indicated by the colour red for 'focused', whereas the colour blue indicates 'idleness'. Over time, the brain slowly becomes redder, indicating that the L-theanine group displayed more brain cognitive activity compared to the control group.

Here, neuroimaging and brain imaging technologies work along pharmacopornographic lines. By rendering the body and brain as transparent, they detach the body from the brain, *and* the body and brain from the subject. The pornographic display of the brain and cognitive processes is shown by "converting the body into information", and "capturing the body's system of affect production".⁶⁷ By visualising the brain's interaction with nootropic substances, and seeing our brains in terms of brain chemistry, "the more we become subject to neurochemical evaluation and intervention".⁶⁸

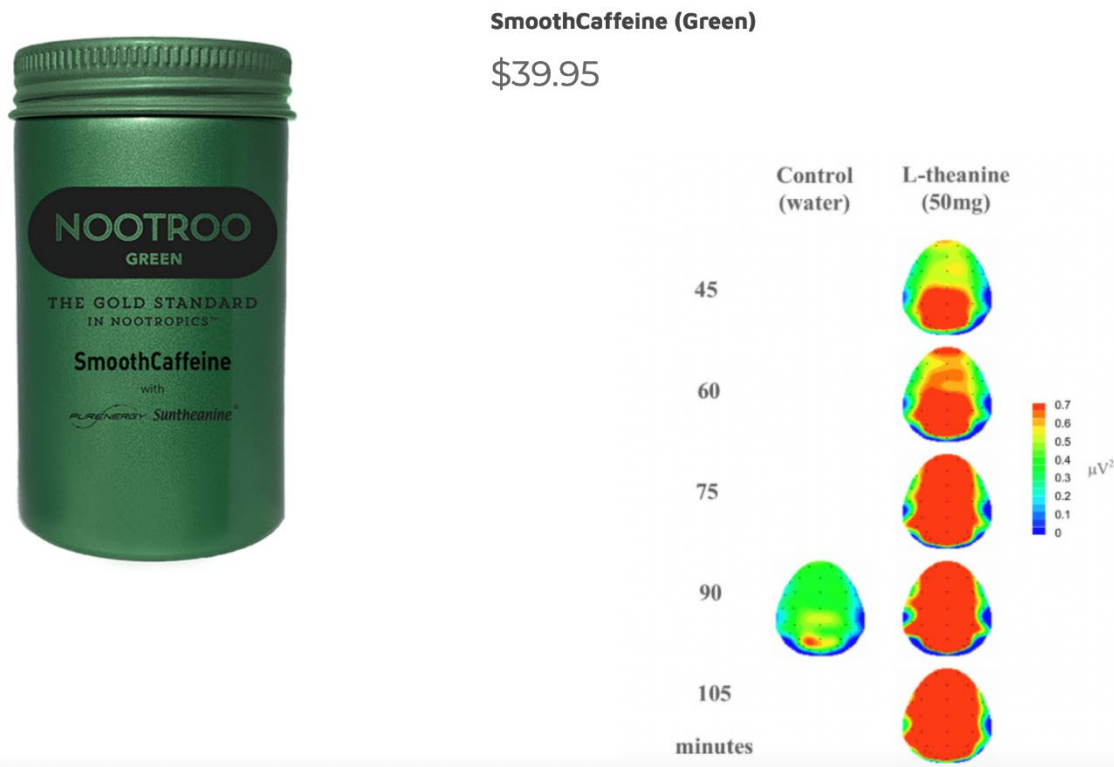


Figure 5: Neuroimaging used as 'proof' by Matzner in marketing his Nootroo products (Nootroo nd.).

The act of ingesting slow, soft technologies is encouraged in the system of pharmacopornographic biocapitalism -- a power centred on fostering, nurturing, and multiplying life and, "*inventing* the subject and producing it on a global scale"⁶⁹. As this section has demonstrated, the acceptable form of masculine selfcare is one aimed at the active, thinking mind (as 'real' existence), while the passive body is perceived of as an obstacle to peak 'superhumanity'. Moreover, it is the advancement of science, technology, and biomedicine that this masculine subject relies on to reverse anthropogenic damages. The brain has become integral to self-identity, and like the body, is opened up to modification, self-styling and enhancement. The 'neuroscience turn' and nootropics work together to reshape and reorganise human vitality. By making the internal visible, human life is made to make sense through neurotransmitters, neural pathways, and synaptic connections. The neoliberal ethic of self-care and continual self-development is underpinned by the idea of an elastic, plastic, neuronal subject, where the brain has joined the rest of the body as a project.

Trans*

Jack Halberstam writes on trans*: “the asterisk modifies the meaning of transitivity by refusing to situate transition in relation to a destination, a final form, a specific shape, or an established configuration of desire and identity”.⁷⁰ Thus far we have discussed the externalisation -- via socially mediated consumer testimonials (Kindbody), self-promotion (Matzner) and medical-scientific discourse (both) – of legibly gendered bodies; particularly those which sit within the man / woman binary. These bodies ostensibly make sense. More importantly, these bodies are offered as externalised proof of the effectiveness of ingestible somatechnics power. We turn now to the less-, or even il-, legible bodies through a discussion of trans* body-subjects. Much has already been written on the way trans* bodies queer normative sexual and gender discourses.⁷¹ Thus, we do not rehearse these arguments in great detail here. Rather we consider illegibility as an em-fleshed form which operates differently from the embodied and em-brained modes outlined above. In particular, we consider how trans* subjects biohack technologies through a form of bodily externalisation which moves away from the gendered forms of biopolitical capture offered by Kindbody and Nootroo.

Here we consider biohacking through a (trans) feminist lens. We draw on Hester's 2018 discussion of the speculum as a 'self-help technology' when used by second-wave feminists since the 1970s. In 1997, Haraway explained the repossessed speculum as a self-defining technology and as a sign of the Women's Liberation Movement. She explains: “Those collective sessions with the speculum and mirror were not only symbols, however. They were self-help and self-experimentation practices in a period in which abortion was still illegal and unsafe”.⁷² These self-help, DIY groups produced a collective of self-taught women that gained knowledge about their bodily autonomy outside of established professionalised medical control, and outside of market-driven healthcare. Returning to our discussion of 'em-ness' let us recall that its etymology refers to a transitive form. Rather than moving towards fixity in the discursive constitutions of (feminised) 'body' and (masculinised) 'mind' offered by commercial medical science, we stay with the trans* and 'em-' form in the extimate space of the flesh. This too, reminds us of Muñoz's 2009 theorisation of queer futurity: as an ideality, as a “not yet here”. Queer as a 'not yet here' is analogous to the *transition*; the *moving* of one state to another -- neither here nor there. Rather than the 'proofed' future of ART or 'smart drugs' the trans* mode of em-fleshedness works as (trans)feminist, rather than neoliberal, mode of self-help / hacking. Again, our use of the 'em-' prefix is a way of distancing from the assumed taken-for-grantedness of gendered subjectivity. In this case, we wish – via further engagement

with Preciado's work – to distance such fleshiness from the romanticised 'authentic' flesh associated with phenomenology.

We have drawn on Preciado's queer engagement with Foucault throughout this article. Here, we move to a more sustained focus on the 'body essay' *Testo Junkie* and broader project as a form of trans-feminist biohacking. The contradictions of constructing oneself using pharmaceutical somatechnologies of neoliberal enhancement are not lost on Preciado. For Preciado hacking such somatechs are a way of life which refuses the future-proofing logic of heteronormative family-planning or nootropic enhancement. Rather, biohacking, for him is a transitive form of presentism which is highly attentive to the intersection between body and mind at the interface of the flesh. The experimental ordering of his sex, sexuality, and gender are informed by his philosophy, which he purposively opens up to critique. For him, subjectivity, sexuality, and gender are certainly plastic; they are historically constructed fictions and political artifacts that *should* be critiqued, rather than whole-some identities one achieves via ingestion and commitment to forms of self-improvement. His self-project of a 'slow transition' from female to male is chronicled in his book *Testo Junkie*. Here, Preciado details his own consumption of illegally obtained testosterone and the subsequent molecular transformation of his sex. His two 'choices' are either to accept a psychiatric classification, or a legal classification as a drug addict, he explains: "I must choose between two psychoses: in the one (gender identity disorder), testosterone appears as a medicine, and in the other (addiction) testosterone becomes the substance on which I am dependent"⁷³. In either of the 'choices', Preciado is stuck in a political trap, he must 'confess' to the state that he is either mad, or a junkie. Then, the state will manage his body and desires accordingly.⁷⁴ He questions: "Am I a body? Or should one say, Am I the body-of-the-state?"⁷⁵ Preciado does not completely denounce the system of *somato-pouvoir* in a libertarian fashion, instead, his aim is to explore, in Stephens' words "the conditions and possibilities under which its tools can be appropriated and used in unauthorised ways"⁷⁶. Preciado's 'slow transitioning' and decision to illegally obtain testosterone are exemplified self-making practices occurring internal to his body are also externalised through the flesh.

As Preciado explains, there are two types of subjects that engage with the hormonal drug, the first use it, "as part of a protocol to change sex", and the second, are, "self-medicating without trying to change their gender legally or going through any psychiatric follow-up"⁷⁷. Preciado belongs to the latter group; he explains that he does not identify (or agree) with the term or diagnostic criteria for gender dysphoria. Rather, he identifies with "gender pirates" and "gender hackers"; "We're *copyleft* users who consider sex hormones free and open biocodes, whose use shouldn't be

regulated by the state or commandeered by pharmaceutical companies”.⁷⁸

Preciado's self-experimentation is thus a form of feminist self-help, outside of institutionally sanctioned medical usage. By illicitly self-dosing, Preciado repurposes the sex hormones outside of a prescribed 'feminine' or 'masculine' transition -- his transition is a 'not yet here'. He does so to restructure his own self-understanding as a 'sexed' body, not to allegorise transsexuality or masculinity in an effort to achieve ticks from medical professionals and obtain a sense of a 'natural', harmonious gender. For him, his biohacked body is a refusal of “sexual division of flesh”⁷⁹ by normative medical science.

Gender is a technology that dissolves into the body for Preciado; gender is *somatechnics*. Gender is more than a Butlerian performance, or even a caricature, it is a mechanism for technical subjectification via the presentation of a broken, illegible body. As Preciado explains; it is, “spliced, cut, moved, cited, imitated, swallowed, injected, bought, sold, modified, mortgaged, transferred, downloaded, enforced, translated, falsified, fabricated, swapped, dosed, administered, extracted, contracted, concealed, negated, renounced, betrayed [...] it transmutes”.⁸⁰ Preciado avoids normative capture by resisting subjectification via psychomedical institutions. He does so via his refusal of legibility, by refusing the promises of wholeness and future-proofing offered by companies such as Kindbody and Nootroo. In this way Preciado's body can be seen as monstrous – a category with which Preciado recently identifies and reworks in his short book *Can The Monster Speak?*⁸¹ Rather than searching for a 'cure' for his gender 'transmutations', Preciado administers Testogel with the knowledge that the production of sexual difference, of the two states of normalised being – as either female or male – exist, “only as 'political fictions', as somatic effects of the technical process of normalisation”.⁸² The question then is, is Preciado's critique and resistance enough to remove him from the systems of psychomedical control and the social order of reproduction?

In *Technologies of the Self*, Foucault enquires as to how individuals perform, “operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality”.⁸³ These technologies can be understood as a form of self-care – how an individual acts upon themselves, through continually concerning the self with the self. Foucault looks at the practices of meditation, self-examination, confession, sexuality, diet, and dream interpretation. Technologies of the self and *techne tou biou* are integral to the articulation of power. Every possible form of transformation and transgression emerges from the existing material conditions. Power has a dual consequence; it subjugates but also enables the subject to experience joy and expansion. Micropolitical technologies constitute the

subject in a way that both controls and empowers. The fundamental principle of a “trans-feminism movement capable of facing *porno-punk* modernity”⁸⁴ is not a resignation, but a negotiation with the fact the body is both one’s own and the body of the multitude. Then, one can navigate “potential spaces for political agency and critical resistance to normalisation”.⁸⁵ Preciado uses and repurposes the very technical interventions that constitute his gender, sex, sexuality, and identity in the pharmacopornographic regime. Preciado’s engagement with auto-experimental forms of embodiment represents a type of radical amateurism quite different to Matzner’s biohacking and Kindbody’s smart interventions. Rather, Preciado’s use of illicit hormones and Testogel work as a refusal to be imprinted as a psychosexual body, meaning he opts for non-recognition – at least non-recognition within normative gender arrangements.

We close our article with a less chronicled trans* story – a poetic ‘bio-art’ by trans* Latina woman, micha cárdenas.⁸⁶ Titled, ‘Pregnancy’ cárdenas documents coming off her prescribed hormones so she can cryogenically freeze and bank her sperm. ‘Pregnancy’ is a response to two things: firstly, to the systematic and material violence trans* women of colour face, and secondly to the largely transmisogynist discourses in both academia and mainstream culture. As cárdenas explains, in her commentary of the work for *Transgender Studies Quarterly*, existing literature on trans reproduction is chiefly written on and for transgender men.⁸⁷ Therefore, the project of ‘Pregnancy’ is to present a self-written, future-oriented experience of a trans woman of colour experimenting with her reproductive capacities. Through cárdenas’ work we glimpse a queer future which centres the spliced, broken and motile trans* body. Rather than ‘proving’ her future as rendered whole via somatechnological intervention, cárdenas’s work operates as a site of em-fleshing. The multimedia, interdisciplinary art piece consists of poetry alongside photographic slides of cárdenas’ sperm coming back into her body after she consciously shifted her hormonal levels back to ‘male’, as seen in figure 6.

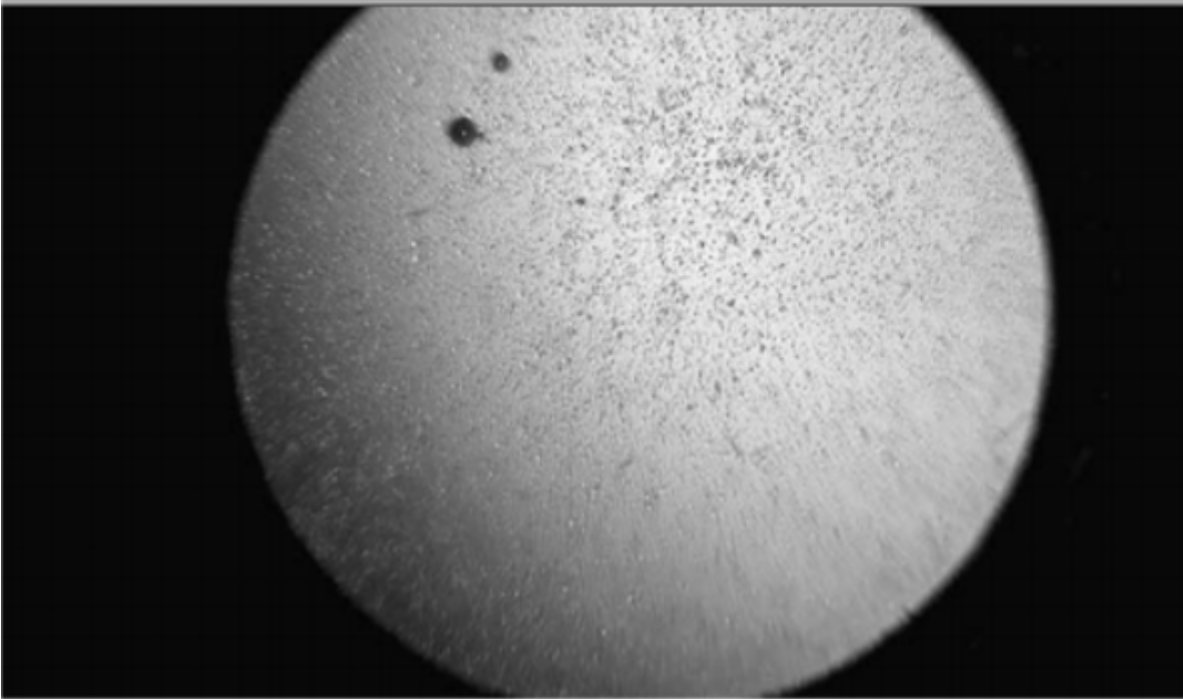


Figure 6: Slide from micha cárdenas' 'Pregnancy' project (cárdenas 2016).

The slides are stills from a short video cárdenas made after other trans* women taught her she did not have to spend hundreds of dollars for a doctor to retrieve her sperm. Instead, she purchased a cheap child's microscope and documented her "morphology and motility"..⁸⁸ cárdenas wrote the poems while her body was shifting back; her body and reproductive capacities neither here nor there, then suddenly, re-shaped and re-marked as 'male'. The poems, alongside the sub-microscopic slides, document this shift in terms of affective and physiological changes: emotional highs and lows; food cravings; annoying prickly black hair; fights with her partner. cárdenas makes one thing pointedly clear, "I am no testo junkie, this is no experiment, these are not drugs, they're my body. I take hormones every day of my life out of necessity, just to have a body I can live in, to avoid death, to survive"..⁸⁹ Here, cárdenas is making an explicit reference to Preciado. She sees the hormones as taking the form of her body, as a necessity for her continued survival and livelihood, not as an anarcho-punk statement. They become her; soma and technology become fully enmeshed. cárdenas' project is guided by "the feeling of urgency of reproducing in the face of a world that wants me dead"..⁹⁰ And perhaps this is because of its very felt threat of annihilation and the desire for the future, as she explains: "I want more than just to live"..⁹¹ cárdenas wants to bring life into the world, to counter trans* eradication. She exclaims: "we will fight back these genocidal projects, by making life, family, love and

joy, by making babies with our queer trans bodies”⁹². This differs from Preciado, for whom the physiological and political micro-mutation of his body is not an individual practice, as he writes: “I’m not interested in my emotions insomuch as their being mine, belonging only, uniquely to me. I’m not interested in their individual aspects, only in how they are traversed by what isn’t mine”⁹³. Preciado is much more situated in not being situated at all; in being ambiguous and disorientated and disorientating; in constructing and deconstructing a continual project of self-annihilation and re-birth. Where their projects intersect however is their externalising project of documenting, in Preciado’s words “the theoretical and physical changes incited in [the] body by loss, desire, elation, failure, or renouncement”⁹⁴. The difference is that Preciado invites failure in for dinner, while cárdenas bargains with it in order to “have a body I can live in, to avoid death, to survive”⁹⁵. Biological life for cárdenas is felt as precarious, as bare life. Preciado and cárdenas write themselves into life differently. Like we have outlined, the body is now regulated and managed from the inside out. cárdenas’ project turns this into a self-stylised praxis: she is the regulator and manager of her own autonomy and anatomy. Like Preciado’s ‘body-essay’, cárdenas produced ‘biological art’.

Conclusion

Foucault’s work shows us that every mode of power changes how the body as a site of subject formation is articulated and disarticulated. The body – particularly the gendered body -- is marked by social, cultural, and political tools. Such ‘marks’ bear more than (dis)articulation or discourse, however. Rather these marks are artifactual and revelatory, as part of what we have (drawing on Preciado) discussed as a pharmacopornographic regime. Here, we discussed three contemporary sites of this regime, as one’s where power is *ingested* and absorbed via complex somatechnologies. While the ingestion or absorption of ART, nootropics and hormones might seem an interiorisation of power, adherent to biopolitical and even disciplinary regimes, we noted the externalising (pornographic, but also one which hearkens back to sovereign regimes of power) impulse requisite for the gendered subject to rise out of these sites. The bodies offered by Kindbody and Nootroo are cryogenically frozen, enhanced and traded, invested in and multiplied. The promise is that a rendering of the gendered body as a series of manageable, artifactualised ‘parts’ (“retrieved eggs”, enhanced brains) will bring a future win, an integrated, full body, and subjectivity.

In our final site – that of the trans* body – we potentially witness some-body else. Rather than ‘resisting’ technologies of gender biomedicalisation, both Preciado

and cárdenas bargain with the technology. This opposes Kindbody's and Matzner's approach, who have full faith in the technology and its technique, and believes it holds the key to saving humanity and advancing the species-body. cárdenas and Preciado integrate existing technologies into their bodies but re-articulate its technique. If we are to consider technology as having two 'substances': its utility and its socially inscribed political power, then cárdenas and Preciado's respective projects work to bifurcate technology. They isolate gender transitioning's technique of subjugation and re-configure its utility outside of direct institutions of biomedicalisation. cárdenas and Preciado re-write the flesh back into their bodies.

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Notes

¹ See Bordo 1993; Heyes 2007; King 2004; Macleod and Durrheim 2002; McNay 2013; Ouellette, 2016; Palmer 2010; Weber 2009.

² Foucault 1977, 148.

³ Preciado 2013.

⁴ Preciado explains pharmacopornography as "a form of control that is both democratic and private, edible, drinkable, inhalable, and easy to administer, whose spread throughout the social body has never been so rapid or so undetectable" (207).

⁵ Sullivan 2014, 188.

⁶ Preciado, 78.

⁷ Preciado, 79.

⁸ Of course, this is a spurious critique, even the 'early Foucault', generally considered more concerned with structuralism and discourse includes lively accounts of the body which are far from the arid accounts of which he is sometimes unfairly associated. Genealogy, even in its Nietzschean form, acknowledges that history leaves traces on the body; genealogy considers that language, desires,

morals, and understanding of the human body are subject to, in Foucault's words "invasions, struggles, plundering, disguises, ploys" via discourse (1977, 139).

⁹ Preciado, 2013, p. 43.

¹⁰ Preciado 2013, 54. Emphasis in the original.

¹¹ Preciado 2013, 271-3.

¹² See Foucault 2003: "[I]f we are to struggle against disciplines, or rather against disciplinary power, in our search for a nondisciplinary power, we should not be turning to the old right of sovereignty; we should be looking for a new right that is both antidisciplinary and emancipated from the principle of sovereignty" (39-40).

¹³ Foucault 1977.

¹⁴ This is a shift from *results* to the focus on *processes* -- as Foucault writes in *DP*: "Discipline is a political anatomy of *detail*" (139, emphasis added).

¹⁵ Foucault 1995, 192.

¹⁶ See King 2004; Macleod and Durrheim 2002; McNay 2013.

¹⁷ Through both governmentality and biopolitics, the ambiguous and disordered individual is aggregated into subgroups as Li explains: "divided by gender, location, age, income, or race, each with characteristic deficiencies that serve as points of entry for corrective interventions" (275).

¹⁸ Judith Butler explains diagnostic criteria for sex reassignment surgery, "In San Francisco, FTM [female to male] candidates actually practice the narrative of gender essentialism that they are required to perform before they go in to see the doctors, and there are now coaches to help them, dramaturgs of transsexuality who will help you make the case" (2004, 71). Trans patients must 'confess' to meet the diagnostic criteria for gender identity dysphoria (GID), and only then can they obtain access to transition technologies. Confessions operate as a biopolitical strategy; the subject must confess to being dis-ordered in order to become intelligibly re-ordered.

¹⁹ The apparatuses of controlling sex were not subsumed but multiplied into terrains of behaviour and cognition. Gender answered the question of how one's psychosexual identity could contradict their inherent 'femaleness' or 'maleness'. As Preciado argues of Money:

[H]e was essentially thinking of the possibility of using technologies (from hormones to social techniques, such as those employed in pedagogic and administrative institutions) to modify the body or to produce subjectivity intentionally in order to conform to a preexisting visual or biopolitical order, which was prescriptive for what was supposed to be a female or male human body (99-100).

²⁰ While earlier eugenic programs emphasised state intervention and control over the population's reproduction, liberal eugenics emphasise a 'flexible', customisable approach to parent's decision-making about their fertility and reproduction. Catherine Mills (2011) explains the term 'liberal eugenics', as firstly, morally distinct from the historical, totalitarian predecessor of early twentieth century eugenics because it "protects or enhances, rather than restricts, reproductive freedom" (37). Mills argues this attitude of liberal decision making and having 'options' is endorsed as "the best defence against coercive reproductive policies and practices" (37-8). The difference between 'old eugenics' and 'liberal eugenics' then, is that the former state-led programmes sought to produce a particular population with specific traits and qualities, whereas the latter works through the 'ethical' and informed 'choice' made by 'liberated' consumers.

²¹ See 209. Preciado's work, both stylistically and conceptually, is purposively campy, cheeky, and idiosyncratic. The very (self-aware yet ostentatious) term 'pharmacopornography' exemplifies this.

²² See Adams, 407. According to Gossel's (1999) account, Doris had just given birth to their fourth child and Wagner "decided that their family was complete" (106). Rather than having the pills in a cannister, Wagner designed a calendar which indicated daily doses and was discreet enough to fit in a woman's handbag. His model was patented and became the Ortho-Novum dispenser.

²³ Full quote appears in Watkins 1998: "...unfettered. From the beginning, woman has been a vassal to the temporal demands – and frequently the aberrations -- of the cyclical mechanism of her reproductive system. Now, to a degree heretofore unknown, she is permitted normalisation, enhancement, or suspension of cyclical function in appropriated potential (37). While beyond the scope of the present article to discuss contemporary advertising discourse around the pill it is worth noting the 2021 launch of the QlairaApp by the Bayer Group on smart devices. QlairaApp is a "missed pill guide" and "reminder" for consumers of Bayer's contraceptive pills. The copy assures users "it's all very easy!". This recent app uses much the same discourse as its 1960s' predecessors.

²⁴ Foucault 1978, 77.

²⁵ 211.

²⁶ OED Online.

²⁷ Kindbody 2022. Kindbody's services range from: "fertility treatments, including IVF and egg freezing, to gynaecology, wellness, and LGBTQ+ care" (Kindbody, 2021a).

²⁸ For example, Kindbody was founded in 2018 with US\$6.3M seed funding. See van de Wiel 2020, 311.

²⁹ The uptake of companies like Facebook providing fertility benefits is undoubtedly the result of the United States not having a universal healthcare program.

³⁰ As Silvia Camporesi (2017) argues, the externalisation of reproduction, "goes hand in hand with an unprecedented responsabilisation of reproduction whereby women are regarded as 'managers' of their pregnancies" (p. 177).

³¹ Kindbody travel urban areas in a their yellow 'fertility van' offering information on egg freezing and on the spot fertility testing, see Kindbody, 2021a. The company's signature yellow 'fertility van' allows them to mobilise their cause in 'fun' pop-up events and broaden their geographical reach. Phrases such as "You will never be as fertile as you are today", "We are born with all the eggs we will ever have" and "Freezing eggs is like freezing time" are scattered around the van in photo frames. The pithy phrases represent the speculative temporal logic in which fertility is always decreasing and slipping away -- you are never too young to concern yourself with it.

³² Kindbody 2018.

³³ *ibid.*

³⁴ Kindbody 2022.

³⁵ KindBody 2022b.

³⁶ *ibid.*

³⁷ See Foucault's comments in 'Afterword: a genealogy of ethics':

What strikes me is the fact that in our society, art has become something which is related only to objects and not to individuals, or to life. That art is something which is specialised or which is done by experts who are artists. But couldn't everyone's life become a work of art? Why should the lamp or the house be an art object, but not our life? (1983, 236)

³⁸ Kindbody 2022c.

³⁹ Kindbody 2021.

⁴⁰ A video produced to encourage women to share their 'journeys' is titled 'Sharing is Caring' Kindbody customer, Liliana Vazquez "dives deep into her personal story" as a form of "leverag[ing] the power of sharing". See Kindbody 2021a.

⁴¹ Kindbody 2021b.

⁴² *ibid.*

⁴³ *ibid.*

⁴⁴ Rajan 2006, p. 116.

⁴⁵ See McIntyre, Negra and O'Sullivan 2021.

⁴⁶ Wexler 2017.

⁴⁷ See various popular long reads on such matters, with a particular focus on Silicon Valley 'smart' workers: See Kelly 2020; Solon 2016. A number of books have also been written on the matter: see Austin 2018; Wiener 2020.

⁴⁸ Malatino 2017, 181.

⁴⁹ Pitts Taylor 2010, 635.

⁵⁰ Fine 2010.

⁵¹ Theories of brain plasticity are also heralded as rejecting biological reductionist accounts of brain fixity, as with the examples of neurosexism and the 'male' and 'female' brains. See Clark 1999 and his discussion, which refers to the plastic brain as a culturally, socially, and biologically *situated* brain (5). While plasticity in some way counters 'hardwired' biological and neurological reductionism, it is far from a liberatory move from fixity to flux.

⁵² Saniotis 2013, 16.

⁵³ Giurgea 1977, 235.

⁵⁴ This distinction between synthetic mass produced 'nano-based' smart drugs, with that of ancient, 'natural' medicinal herbs and botanicals can be seen in the, often at times, gendered consumption, and marketing of these products. For example, Alex Jones and Joe Rogan's affiliations with 'Alpha Brain' and 'Brain Force One', compared to Instagram influencers promotion of 'shroom tonics' and 'naturally healthy' nootropics. This distinction presents man as being associated with machine or technology and woman with nature.

⁵⁵ Rudra 2018, 33-4.

⁵⁶ *ibid.*

⁵⁷ Saniotis, 17.

⁵⁸ Malatino 2017, 179.

⁵⁹ Malatino, 182.

⁶⁰ Malatino discusses on page 182: nootropics and biohacking merge with, "hyper-individualised self-help discourses and the privatised commoditisation of technologies of self-making, rhetorically garbed in the promises of folks who seem like the snake-oil salesmen of late liberalism".

⁶¹ KQED 2016.

⁶² Matznerd 2019.

⁶³ Fullagar 2009, 309.

⁶⁴ Matznerd 2019.

⁶⁵ Nootroo "SmoothCaffeine" n.d.

⁶⁶ Nobre et al. 2008.

⁶⁷ Preciado, 271-5.

⁶⁸ Bloomfield & Dale 2020, 38

⁶⁹ Preciado, 54.

⁷⁰ Halberstam 2018, 4.

⁷¹ Halberstam argues on page 4, that until the middle of the 20th century, "countless transgender men and women fell between the cracks of the classification systems designed to explain their plight and

found themselves stranded in unnameable realms of embodiment. Today we have an abundance of names for who we are and some people actively desire that space of the unnameable again” See also MacKinnon 2018, who observes: “Trans subjects who advocate against the conflation of non-normative sexuality and gender identity are paradoxically forced to forge their existence through medical discourses and taxonomies of deviance” (p. 203). Bodies that transgress the dualistic binary of male / female pose a threat to species propagation and are coaxed into ‘confessing’ as being ‘one’ or the ‘other’.

⁷² Haraway 1997, 42.

⁷³ Preciado, 257.

⁷⁴ It is worth noting Preciado's recent 2021 provocation and critique of psychoanalysis *Can the Monster Speak?*. In this short book, Preciado interrogates the means through which psychoanalysis constructs the trans* figure as monstrous and, indeed, ‘mad’. This book is important, but beyond the scope of this article's discussion.

⁷⁵ Preciado, 257.

⁷⁶ Stephens 2010, 8-9.

⁷⁷ Preciado, 55.

⁷⁸ *ibid.*

⁷⁹ Preciado, 47.

⁸⁰ Preciado, 129.

⁸¹ Preciado likely draws on Halberstam 1995: “The monster itself is an economic form in that it condenses various racial and sexual threats to nation, capitalism, and the bourgeoisie in one body” (3).

⁸² Preciado, 142. See also MacKinnon 195: “Trans subjectivity is hinged upon psychosexual discourses designed to integrate sexually deviant bodies into systems of control organised to cultivate life”.

⁸³ Foucault 1988, 18.

⁸⁴ Preciado, 348.

⁸⁵ *ibid.*

⁸⁶ cárdenas 2016.

⁸⁷ cárdenas, 48

⁸⁸ cárdenas, 52.

⁸⁹ cárdenas, 49.

⁹⁰ *ibid.*

⁹¹ cárdenas, 55.

⁹² cárdenas, 50.

⁹³ Preciado, 11.

⁹⁴ *ibid.*

⁹⁵ cárdenas, 49.