

# Phenomenology of Menstruation

## (Bio)artworks Within a Feminist Occult

WHITEFEATHER HUNTER

*Who has agency in shaping the meanings of menstruation? This article discusses complexities in restructuring menstruation as a broad cultural phenomenon, presenting an inquiry into how performance and art/media production are used by those interested in the power of determining social representations of menstruation and/or reproductive bodies. Included are examples of agentic effect, drawn from social media to historical ritual, to my own artistic practice.*

---

Because of its vividness, red is often the sign of what remains otherwise unseen: the absent cause, the hidden poison ... primordial vividness, an apprehensible quality distinguishable from the given forms it takes. This phenomenological “possibility” ... is the first condition of semiotic activity ...

— *Menely and Ronda, 2013, p. 25*

### **Introduction: Menstruation as Cultural Phenomenon**

Who has agency in shaping the meanings of menstruation? Women, artists, institutions, others? Towards what ends? To address these questions, I begin with an inquiry into how performance and art/media production are used by those interested in the power of determining social representations of menstruation and/or reproductive bodies; this inquiry includes discussion of a range of examples of agentic effect, from contemporary popular culture (social media), to related historical cultural ritual, to works drawn from my own artistic practice. Through these, I discuss some of the complexities in restructuring menstruation as a broad cultural phenomenon. I'm interested in furthering what I see as a need for nuanced examination of who exercises control over menstruation and its signification, tied, *or not*

*tied* to female reproduction. The examples I provide show how concepts of 'natural' menstruation and essentialist ideas of blood are complicated by ritualistic, artistic, and bureaucratic sociocultural constructions including through biotechnology/biohazard protocols and a spectrum of experiences of the feminine.

I begin with highlighting the examples of non-menstruators who engage with the signification of menstruation in efforts to (re)shape biopolitical ontologies. Following these examples, I discuss hegemonic gate-keeping pervasive within institutional and wider cultures, with regards to the production of (bio)artistic and video performance works where I have utilized my own menstrual blood and related body fluids. In these works, I redescribe cultural taboos around the abject materiality of menstruation and other body leaks as they pertain to magic/ritual in terms of control frameworks, while also experimenting with their material significance and applicability. I explain how my (bio)artworks with blood materiality implicate its socio-physiological phenomenology in fertilizing more feminist knowledge within masculinist spaces such as the laboratory and media culture; these are spaces where menstruation is sometimes contested territory and any leakiness unwelcome outside of controlled parameters. Specific tensions, shown in the cultural examples I provide and in my own works, are created through acts of social control over processes of menstrual/bleeding; these tensions delineate the cultural phenomenon of menstruation and provide frameworks that I pinpoint as being open to feminist restructuring through art.

### **Menstrual Signification and its Implications**

From December 2022 to early 2023, thousands of people on #lgbtq TikTok challenged content creator, Jeffrey Marsh, who'd posted a video about signing a brand deal for tampons. Marsh, a nonbinary non-menstruator born without a uterus, was derided for accepting sponsorship money for a product they would not have occasion to use, and for presuming to speak for menstruators. In response, Marsh aligned their actions with another TikTok creator, a transgender woman who had also, "gotten a lot of hate," on social media for carrying and discussing tampons (Marsh, 2022). The

person Marsh referred to, however, had assured viewers that she had not accepted sponsorship from any tampon company and carries tampons in case a menstruating friend might need one (Mulvaney, 2022). Conversely, Marsh defended their actions with the conviction that, "...I am a feminist, and I will keep fighting for your rights even if you hate me to my core," affirming their intentions to continue speaking on behalf of menstruators in paid ads (Marsh, 2022).

Numerous trans people responded that Marsh did not represent their views; for many, menstruation is a cultural signifier of biological femaleness and not claimable – for profit or otherwise – by those who had not endured it physiologically. One transgender woman, however, insisted that she had 'periods' due to feminizing hormone therapy and was simply missing the "murder scene" in her underwear (The Cheeky Mum, 2023). Another explained that she'd previously believed she had 'periods' due to a strong desire to be biologically female. She had reconciled her lack of signification of biological womanhood by having gender-affirming surgery; now, her neovaginal experience is, "so high maintenance," that she, "just can't imagine having uterine cramps and bleeding," in addition (Zaya, 2023). Several commenters suggested that the experiences of trans men as menstruators would have been a better opportunity for trans and/or nonbinary inclusivity in tampon advertising.

Menstruation as a cultural signifier of the feminine (including feminine agency or lack thereof) has been assigned to or utilized by men and/or non-menstruators throughout history. This has been studied by cultural anthropologists and medical historians (Maor Roguin, Roguin and Roguin, 2021; Meyer, 2014; Buckley and Gottlieb, 1988; Hogbin, 1970). Ian Hogbin observed 'artificial menstruation' acts of men on Wogeo Island (near New Guinea). Wageva see menstruation as a purification process after 'contamination' from sexual intercourse; women possess a natural advantage, and men must simulate similarly purifying bloodletting. In a ritual known as *sara*, Wageva men gash the glans of their erect penises using a crab claw (Hogbin, 1970, p. 88). The blood produced is treated as taboo as menstrual fluid and after the ritual, sex and food restrictions are observed following lunar cycles. Yet, as Hogbin explains, men are not required to menstruate monthly – only when illness supposedly results from sexual contact.

This cultural technique exhibits a near universal understanding of magic/ritual as a framework for control – in this case, regarding the underlying premise of blood, *especially* menstrual blood, as powerful or dangerous (Hogbin, 1970, p. 172). By harnessing the phenomenological power of menstruation via performative simulation, Wogeo men assert socio-physiological agency where women are seen to have innate power.<sup>1</sup>

For Marsh, their pseudo-menstrual manifestation resulted in sponsorship dollars gained via performance of an advertising gimmick cum biopolitics, and in the viral response that garnered more attention, raising their profile on the platform. Compare this with Canadian poet and spoken word artist, Rupi Kaur's infamous Instagram post from 2015: a photo of herself rolled over in bed to expose that she had menstruated through her sweatpants while sleeping. This unmistakable evidence of womanhood sparked hate targeted at her reproductive biology. Kaur recently reposted the photo to discuss reactions she had received:

7 years ago during women's history month i took this photo for a university project where i was tackling stigmas around menstruation ... the photo was quickly censored, went viral, and the internet unleashed their \*opinions\*.  
before it was removed, men were leaving comments like "this is disgusting. you're disgusting. thank god we'll be able to make babies in labs soon and won't need women anymore" ... i was sent death and rape threats from around the world. [sic] (Kaur, 2023)

'Natural' menstruation seems to have no place in cultural representations (such as social media) nor in the lab, yet proxy 'bleeding' is acceptable; this is something that has been used consistently in advertising for menstrual hygiene technologies and products, not limited to the Marsh example (Vostrel, 2011). Menstruation and by extension, reproduction are seen as phenomena displaceable by masculinist tech advances and performances – not restricted to biological women's social control, when individuals born without uteruses desire to channel its socio-physiological agency.

Melissa Meyer has discussed how meanings of male ritual bloodshed have varied, "... but they usually emphasized male appropriation of the life-giving power inherent in women's blood and ability to give birth ..." (Meyer, 2014, p. 83). The appropriation of 'life-giving power' in female

blood and reproduction has fuelled biotech industry, a reality that some of my works mean to engage with critically. This is a concept that I return to in the context of contemporary culture, in restrictions surrounding the production of some of my biotechnologically mediated artworks and ways in which I, in turn, use ritual to regain some control.

### **Cultural (Re)Production Through Biological/Media Art**

Artificial menstruation is a concept that has been explored through artistic video performance and tech objects. British-Japanese artist, Sputniko!, created a work titled *Menstruation Machine - Takashi's Take* that tells the story of a fictitious character who experiences menstruation-as-signifier through use of a mechanical prosthetic:

The metal device, which looks like a chastity belt and is equipped with a blood-dispensing system and electrodes that stimulate the lower abdomen, replicates the pain and bleeding of the average five-day menstruation period ... Takashi builds the Menstruation Machine and wears it out on the town with a girlfriend, strutting around a shopping mall and occasionally doubling over in pain. Thus an internal, private process is transformed into a wearable display of identity. (Sputniko!, 2010)

In this work/mythos, artificial menstruation is desired for the empathy it fosters through an experience of simulated abdominal pain, as well as for its (leaky, red) signification of female identity. The use of technology/simulation positions the fluidity of menstruation as social signifier within a relational framework that supports women's experiences, versus profiting from them.

Sputniko's work follows iconic feminist performance artists such as Carolee Schneemann, Ana Mendieta, Judy Chicago and Teresa Margolles who have created impactful works using their own bodies, vaginas and even menstrual blood; Schneemann's *Interior Scroll* performance (1975) involved the artist unrolling a (bloody?) scroll of text from her vagina to read aloud to her audience, asserting her voice through her embodied experiences because, "it was essential to demonstrate this lived action about 'vulvic space' against the abstraction of the female body and its loss of meaning"

(Moreland, 2015). On the shoulders of these Second Wave feminist artists stand well-known contemporary feminist performance, tech- or bio-artists, such as Orlan, Kathy High, Mary Maggic, and the Gynepunk Collective, who have used a variety of body materials to experiment with hacking/biotechnologies in order to address the malleability of gender and reproduction when mediated by technology; High's performance video work, *Red Scare* (2003) features a woman standing naked against a swirling red sea backdrop, appearing to cast spells while lightning strikes around her. This work, "reflects the possibilities of (eu)genetic selection," where militarized tech spaces (represented by a naval ship exploding on the ocean) attempt to navigate reproductive technologies (High, 2003). Prosthetic machinery (Sputniko!, 2010), reproductive hormones (Maggic, 2015), vaginal microbes (Bates, 2015) and infectious viral vectors to spread love (Torres, 2019) all have become feminist tools for expanding the boundaries of physiological identities, to examine not only the biopolitical effects of technology but to also, "probe the meaning of gender-specific rituals." (Grosz, 2014)

In my practice, working somatically in sci-tech/art is intentionally transgressive. These fields have traditionally viewed female bodies and their processes as objects to be studied, (mis)represented and/or controlled, then repackaged and handed back as dictum – often by those who bear little to no lived physical experience. Sociologist of science, Dorothy Nelkin, has elucidated the biopolitical meaning making of female reproductive body materials in her discussions around ownership of umbilical cord blood through privatization (Nelkin, 2007, p. 119). By (re)personalizing research of taboo body material, I aim to disrupt such hegemonic strategies of control. In utilizing blood and reproduction as creative material, the phenomenology of menstruation becomes a feminist tool for empowerment through embodying it; it is this visceral personification that has not yet been effectively co-opted by masculinist tech tools. Thus, I steer my research outputs towards critique by generating aesthetic objects as crafted 'evidence' of embodied knowledge, to challenge externally authoritative modes of knowledge and culture production.

Next, I discuss four separate, but interrelated artworks I created from 2003 to present: *Bloodline*, 2003; *Blóm + Blóð*, 2015; *The Bactinctorium*, 2017; and *Mooncalf*, 2019-2023. These are a sampling of works that intersect

biotechnology, ecology, magic, and feminism. Socio-physiological agency is both signifier and signified in these projects, where my body – its materiality and the performance of it – come exclusively under my command to creatively inquire and generate new social meanings, through ritualized material manipulation.

### **The Sign of What Remains Otherwise Unseen**

My work titled *Bloodline* (Ill. 1) is a 135-inch-long textile banner, handwoven on a computerized loom. I used Computer-Assisted Design (CAD) software to embed a philosophical phrase about ephemerality into the cloth as I wove it: “Each moment is but a whisper of time.” Areas of raised structural pattern contrast letters created using a ‘plain weave’ structure, so that the entire woven phrase appears embossed. A hallmark of biological art, ephemerality is anchored with a counterweight of symbolic feminist narrative represented by matriliney, as I will explain. The cloth was then rolled into a tight scroll and immersed in a jar of collected menstrual fluid to soak overnight (reminiscent of Schneemann’s scroll). Once the scroll was unfurled, the result was a landscape-like blood line that traversed the width of the banner, bisecting the woven phrase. Atop this textual/textural landscape, I used long strands of hair as an additional signifier of femininity and genetic material, to cross-stitch the names of three generations of my grandmothers: Betty Jean, Annie Eliza, and Emmeline. The blood stories of my grandmothers have in part constructed my sense of self, with regards to reproductive and cultural inheritances. For example, Betty Jean was periodically hospitalized due to severe menorrhagia in her reproductive years. This led to eventual hysterectomy and a reliance on synthetic estrogen from pregnant mares. My own menorrhagia has materially facilitated my art production and biotech experimentation due to its plenitude (over 80mL per month). The blood line, then, is actual and cultural; this translates through both the physiological heritability behind my identity as a woman, via matrilineal blood and through notions of culturally heritable feminine labour tasks and agency found in decorative cloth production. My familial entanglements with equines are greater than conjugated estradiol yet this reproductive hormonal transposition continues to thread



ILL. 1.

WhiteFeather Hunter: *Bloodline*, detail © WhiteFeather Hunter, 2003.

through my experiences, as I later discuss in my work, *Blóm + Blóð*. In that work, horse blood used by the biotech industry for hormone extraction becomes an important material element in another of my representations of familial ‘bloodline.’

The cultural practice of embedding words and symbols into cloth to communicate political statements and/or somatic experiences has been an historically widespread method of exercising agency – particularly in situations where women have limited material means at hand to express themselves (Parker, 2019, p. 215; Rosner, 2021). In *Bloodline*, the mark of my menstrual fluid also becomes a personal signatory line, like an authorization of an archival entry of words/names, their relationality to each other and to me. It is the relationality, the material, and the labour entwined between the two (reproductive and ‘feminine’) that are signified by the menstrual blood.



Authorization via signature in blood is an esoteric binding technique, where blood has the power to connect an object to a person's essence (Griffin et al., 2002, p. 201). This magical power is mythologized in ancient tales of soul-binding contracts, where blood signifies the spiritual agency of the signee, offered in exchange for desired short-term outcomes.<sup>2</sup> Extracting the cost of a soul (or life) via blood signature is closely associated with the Devil and demonological witchcraft activities, or moral impurity.<sup>3,4</sup> Ritual binding with menstrual blood as *materia magica* is likewise within the aegis of the (female) witch, as spiritually/materially corrupt. The dear cost of 'pure' life blood, connected to extracting the vital essence of another, is also a signatory characteristic of some kinds of biotech experimentation and a critical consideration that underpins my practice (Hunter, 2020).

### ***Blóm + Blóð***

*Blóm + Blóð* ('Flowers + Blood' in Icelandic), 2015, is a performance video and textile work I created during an artist residency at the Icelandic Textile Centre in North Iceland. Instead of menstrual fluid, this work utilized a blood type closely connected with interspecies reproductive technologies: mare blood. My residency project began as an inquiry into my genomic lineages via chromosomal data that I had acquired through 23andMe's personal DNA service (23andMe, 2023). I was interested in materializing segments of my genome data through woven structure and pattern, while incorporating characteristic elements of the local landscape into the cloth construction. These elements included plants, mushrooms and lichens for natural dyes, tufts of sheep's wool and horsehair found in fields, and seawater. I integrated these materials via ritual enactments, using my performative body as a conduit for communicating my material processes – for example, I mixed and 'fermented' sunburst lichen in my collected urine to biochemically release its bright pink pigment, orchil.

I also discovered that the landscape included traditional human industry in the form of a slaughterhouse, next door to the textile centre. The slaughterhouse hosed its floors into drainpipes that led to the Greenland Sea, creating a swirling effluent of sheep and horse blood that attracted hordes of screaming gulls to the frothy waves (Ill. 2). I acquired some of



ILL. 2.  
WhiteFeather Hunter. Mixed blood effluent from the local slaughterhouse in Blönduós, Iceland  
© WhiteFeather Hunter, 2015.

this waste blood to include in my work as part of the somatic experience of the locale. I also became friends with an Icelandic whose father owned a ‘blood farm,’ a livestock business where pregnant mares are kept and bled periodically for the local biotech industry. Pregnant mare blood is used to extract hormones used in fertility drugs, mainly to induce ‘superovulation’ (Richard, 2022; Young-Powell, 2022). This product was originally used to stimulate hyperovulation in humans but produced antibodies (Lunenfeld, 2012, p. 22). Similarly, however, pregnant mare urine has been used to produce the hormone replacement therapy product, Premarin™, a conjugated equine estrogen prescribed to women suffering low-estrogen symptoms of menopause – like what my grandmother depended on (Haraway, 2012, p. 307). In both cases, horse-derived exogenous body fluids have been harvested for the development of transspecies therapeutics to moderate the reproductive cycle, including human menstruation.

The small bucket of sheep’s blood I purchased from the slaughterhouse, and the two-litre Coke bottle full of mare’s blood I was given by my friend became ritual objects signifying familial connections and industry, human and more-than-human labour, and interspecies reproductive functioning (Ill. 3). During the horse blood ritual, an Icelandic artist/shaman



ILL. 3.

WhiteFeather Hunter: *Blóm + Blóð* video performance still © WhiteFeather Hunter, 2015.

pounded a drum over my back as I poured blood onto skeins of undyed Icelandic wool yarn laid out on the ground. This auditory, vibrational experience conjured the thundering of horses' hooves I once heard as they ran down the hill on my family farm in Canada; my grandfather bred horses and provided equine stud services for a living. My shaman friend instructed me to conclude the ritual by dumping any remaining blood beneath the rose bush near his house to cause redder blooms, similarly to how protein and iron-rich menstrual blood has been used by some as plant fertilizer (Hannah, 2016).<sup>5,6</sup> Blood as nutriment is an idea I return to in the next works I discuss.

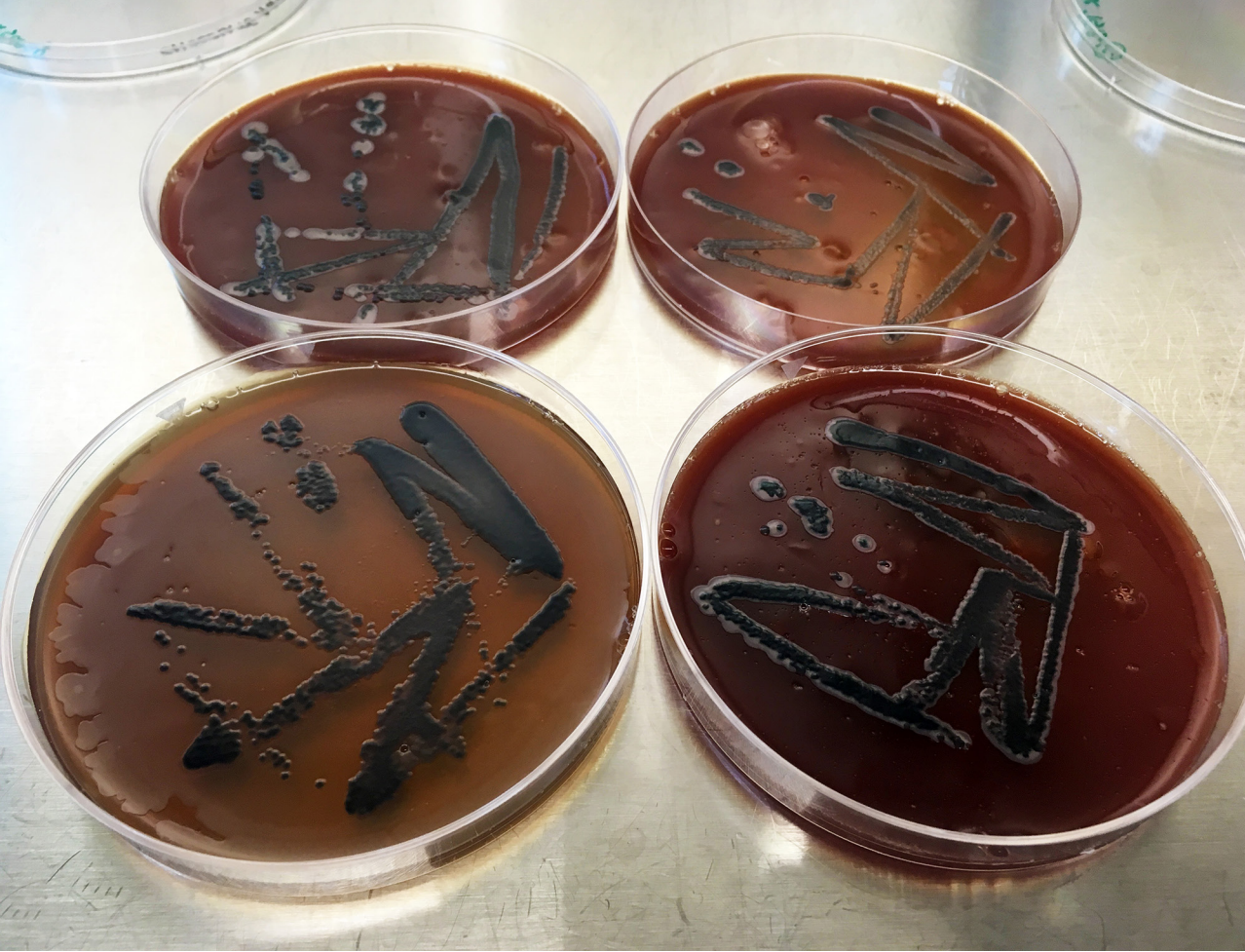
Bleeding horses for art is not new, and blood as nutrient or hybridizing factor extends from folk magical and agricultural practices into the realm of science and biotechnology. A more extreme example than what I presented with my above work, is the project, *Que le cheval vive en moi* (*May the Horse Live in Me!*), 2011, by Art Orienté Objet. In this project, artist Marion Laval-Jeantet performed receiving horse blood transfusions directly on stage. Her biomedical performance was conceptual, an attempt to recreate herself as a multispecies hybrid or, as Donna Haraway put it, a, “multimaterial critter” (Haraway, 2012, p. 301). Beyond a metaphorical

enactment of mythic hybridization, as with the centaur (half horse, half human), Laval-Jeantet became cyborgian by Haraway's definition: one of the "particular sorts of historically situated human beings, becoming-with the practices and artifacts of technoscience..." (Haraway, 2012, p. 301). The concept of becoming-with, through technoscientific practice and in the production of artefacts leads to discussion of the next two works I will highlight: *The Bactinctorium* and *Mooncalf*.

### ***The Bactinctorium***

*The Bactinctorium* was a collaborative research project that I supervised with a small team of female bioart and biodesign researchers, from mid-2017 to late 2018.<sup>7</sup> The focus of our team was to produce bacterial pigments for use as textile dyes. One species of bacteria we used, *Serratia marcescens*, produces a deep red pigment, prodigiosin, that has often been mistaken for divine blood (Gillen and Gibbs, 2011). We derived another pigment from the species, *Vogesella indigofera*, which produces indigoidine (indigo) molecules when cultured on blood. These bacteria have specific nutritional requirements for producing pigment; *Vogesella indigofera* favours a high iron nutrient. We decided, as a group of menstruators, to experiment with using our own menstrual fluids to provide the iron content, mixed with an agar substrate, in culturing this blue-producing bacterium. Since *V. indigofera* is typically grown on sheep's blood agar, we conjectured that our period blood would support its growth just as well.<sup>8</sup>

Our experiments yielded successful results (Ill. 4) but were only authorized by the institution following some unusual biosafety requirements. These included medical invasiveness in the form of mandatory consultations with a general medical practitioner at the university clinic. I received a strong recommendation for vaccinations against numerous sexually transmitted infections, before beginning my lab work. This was regardless of current health status, maintenance of strictly professional (non-sexual) relationships with my lab colleagues, and the fact that I would be working exclusively with my own menstrual fluid (Hey, Hunter, and St-Hilaire, 2019, p. 74). Institutional vigilance around menstrual materiality dictated our interpersonal interactions, bodily autonomy, and research



ILL. 4.  
WhiteFeather Hunter. *V. indigofera* sp. grown on menstrual blood agar by *The Bactinctorium*  
© WhiteFeather Hunter, 2015.

methods within the laboratory setting, and in our creative explorations. The social phenomenon of menstruation was amplified through biopolitical bureaucracy in the form of a biohazard permit that shaped (bio)cultural production. This is an interesting contrast with the easy accessibility of other types of blood I have worked with as the standard in laboratory protocols (and would have been permissible in this project): horse and sheep. Such a contrast highlights the phenomenological power (danger) of menstrual fluid and its threat when made visible, as it ultimately represents a failure to reproduce in alignment with patriarchal society (Yager, 2013).

With *The Bactinctorium* project, we worked to disrupt the instituted social phenomenon of the menstrual ‘biohazard’ through a methodological embrace of witchcraft; this became our avenue for feminist expressions of bodily autonomy in the lab. Our newly established menstrual blood agar protocol became a ‘spell’ for the interspecies manifestation of pigment, with personal meaning (re)ascribed in the process: for example, how practices of ‘care’ using our bodily-derived nutrients imbued a sense of personal accountability and empathy towards microbes we nourished. Hence, performing ritual ‘magic’ was useful in establishing frameworks for what menstruation could mean in a laboratory context, what its power was, outside of and/or within the restraints we encountered. As Hogbin explained (referencing ideas by anthropologist Mary Douglas), “... magic and other ritual serve to focus attention by providing a frame, thus enhancing the memory and linking the present with the relevant past.” (Hogbin, 1970, p. 173) Further to this, Hogbin describes Douglas’ experiences where such framing practices determined moral terms. In linking our experiences of bureaucratic/medicalized control over our bodies to a biopolitical past around the bodies of women (those persecuted as witches) and menstruators in various contexts, we investigated the moral underpinnings of restrictions around menstrual blood. The outputs of our experimentation were the development of cheeky protocols that nevertheless functioned well to produce useful bacteria-dyed colour swatches and fabrics.

### *Mooncalf*

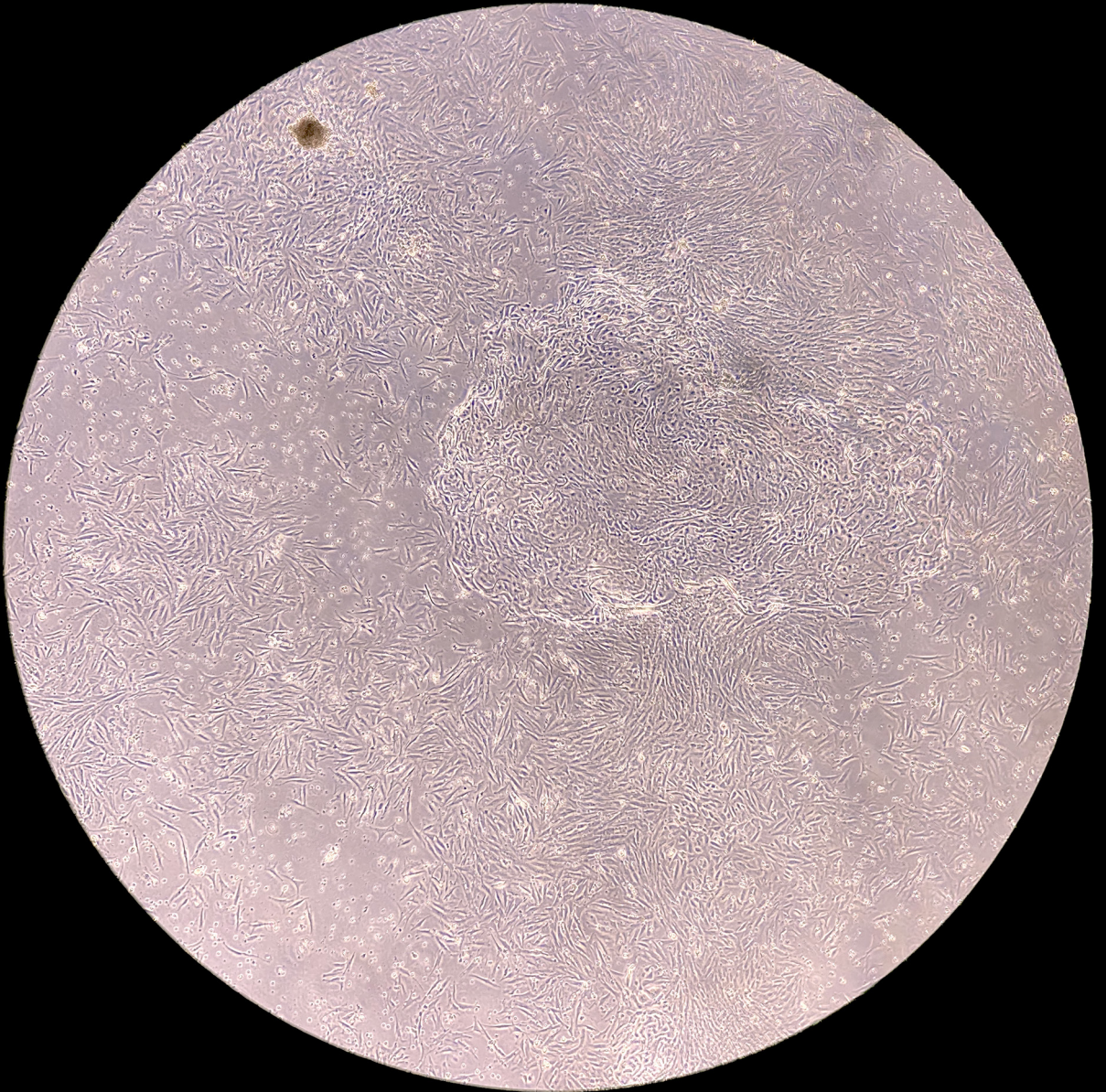
I am familiar with biosafety requirements for my laboratory-based biological art projects yet the seeming arbitrariness of some of them continues to surprise me. This leads to the final project for discussion: *Mooncalf*, 2019-2023. *Mooncalf* has been part of my doctoral research at the University of Western Australia, through a specialized facility called SymbioticA, within the School of Human Sciences. The *Mooncalf* project, described in my biohazard permit application to the UWA Institutional Biosafety Committee, is “a series of scientific experiments to determine if menstrual blood (MB) can be used as a substitute for Fetal Bovine Serum (FBS) in standard cell culture media, to grow mammalian cell types” (Hunter and

Institutional Biosafety Committee, 2023). This project also explores creative applications for the unique population of mesenchymal stem cells found in the endometrial tissue fragments that menstrual fluid contains.

Standard tissue (cell) culture practices utilize horse blood serum and fetal bovine serum as essential proteins for maintaining the viability of different mammalian cell types, including human. Fetal bovine serum is most used, but horse serum is the choice nutrient for growth of certain cells and tissues because of greater protein content (Capricorn Scientific, 2023). However, menstrual fluid contains significantly more proteins than other types of blood (Yang et al., 2012, p. 1024; Evans et al., 2018, p. 585). It is this unique protein profile and lack of adequate research around the implications in biotech development that has supported the potential relevance of my research outputs (Wyatt et al., 2021, p. 2216). Yet, taboo aspects of menstrual fluid and its cultural signification as a power/danger to be contained and controlled have played a part in constraining access to the agency inherent in my own body materials. As with *The Bactinctorium* project, a biopolitics of bureaucratic handling of body fluids and their cultural meanings shaped the processes and outputs of the *Mooncalf* project.

The contested phenomenon of menstruation as innately embodied knowledge (as outlined in examples in the previous section) has confounded standardized biosafety authorization requirements I have had to negotiate in conducting my work. For example, endometrial cells I extracted from my menstrual fluid (Ill. 5) have not undergone clinical sample testing required for the authorized use of primary cells in certain laboratory analyses; this lack of testing is based on the fact that I alone possess legally protected information of the health status of the source (me). The permissibility I eked out from being the bearer of knowledge of these materials, as their source, has been granted by various institutions simply because the situation presents an unconventional circumstance: researcher, research project and research material are irrevocably entwined.

The works created in the *Mooncalf* project: didactic video performances, process artifacts, prototypes, and crafted laboratory apparatuses and garb, are presented as playful challenges to strict institutional bioscience protocols that may be arbitrary in different contexts. For example, a hand-blown glass bioreactor containing cultured menstrual stem cells eventually





ILL. 5. (OPPOSITE)

WhiteFeather Hunter. Endometrial cell explants from menstrual fluid, video still © WhiteFeather Hunter, 2020.

leaked down the plinth it was displayed on, in the gallery in which it was publicly presented. Though it contained no menstrual fluid, its leakiness prompted discussion of institutional containment strategies designed to compartmentalize body materials, particularly those construed as taboo.

When analysed together, the works highlighted in this section form a cohesive repertoire of embodied knowledge where craft and science engagements with menstrual (and other) blood inform a phenomenological approach to bioartistic production. The tension created by the inseparability of matter and identity that I explore reflects some of the political issues in my earlier examples of 'artificial' or other social enactments of menstruation. In the case of my work, the cultural and biological inseparability is used as a feminist re-personalization and empowerment tool; this is within so-called objective science methods, to challenge categorizations established in hierarchical knowledge structures.

## Conclusion

In this paper, I have explored the phenomenology of menstruation by drawing a cultural comparison in the uses of proxy blood/bleeding to represent, replace or reposition its potential and meaning; this is demonstrated as occurring in various ritualized cultural performances concerning the mediation of reproduction/sex/gender, by a spectrum of technologies and for different purposes.

The artworks I have discussed (my own and others') represent a lineage of creative practice concerned with representing the topics of reproduction, feminist uses of technology and body materiality, particularly menstrual fluid, the most socially outrageous signifier of the subjective female body experience. Feminist theorist, Elizabeth Grosz, ties a tight circle around the considerations within these works, in her writing about Sputniko!'s *Menstruation Machine*:

... Freud claimed that [menstrual blood] was the cause of women's shame and the trigger for their art-making, especially weaving, the uniquely female art, in his consideration. This blood leaks everywhere, infecting everything, every living being, with the marks of birth, the ties of lineage that connect and infect generations, that trace life. It is the blood that nests emerging life. We now have medications that can temporarily or permanently delay or prevent menstruation, a great boon in birth control, but also a fluid connection that is threatened with its chemical regulation. We still bleed in other ways, we still require to be brought into being, nested, nurtured, developed. Even with machines we need to continue our lives. Even machines bleed. (Grosz, 2014)

In returning to the question of who has agency in shaping the meanings of menstruation, I have shown how some of the complexities of representation are exemplified through the material conditions surrounding generating performative media art where the meanings of the material are also negotiated through biopolitical enactments/rituals. The symbolism and signification of blood connects bodies to other bodies and is used as nutrient for other bodies in the (re)production of bodies, including bodies of knowledge. Thus, as in Haraway's conception of "response-ability," our collective entanglements with humans (each other), more-than-humans and things situated in the wider phenomenon of culture and being, such as technologies, environments, and rituals all congeal into a clotted mass of troubling/troubled co-becomings (Haraway, 2012).

## Acknowledgements

The author would like to, very gratefully, acknowledge the support of PhD supervisors, Dr. Ionat Zurr and Dr. Stuart Hodgetts who provided valuable feedback in the formulation of this text, as well as material support for laboratory experimentation.

The author would also like to acknowledge funding support from Canada Council for the Arts and Conseil des arts et des lettres du Quebec for the project, *Blóm + Blóð*. Also, infrastructure support from Milieux Institute for Arts, Culture and Technology at Concordia University along with partnership funding support from the Textiles and Materiality Cluster (Milieux Institute) for *The Bactinctorium* project. Additionally, the *Moon-calf* project is part of PhD research financially supported by The Social

Sciences and Humanities Research Council of Canada, the Australian Government, and The University of Western Australia.

*WhiteFeather Hunter is an internationally recognized Canadian artist and scholar. She is currently a PhD candidate in Biological Arts at the University of Western Australia, supported by a Social Sciences and Humanities Research Council of Canada Doctoral Fellowship, Australian Government International RTP Scholarship, UWA International Postgraduate Scholarship, and a Graduate Women of Western Australia Bursary, among other awards. Recent publications include “Mooncalf ‘Unclean’ Meat” in Technoetic Arts Journal and “The Witch in the Lab Coat – Deviant Pathways in Science” in Limina: A Journal of Historical and Cultural Studies.*

#### SUMMARY

### **Phenomenology of Menstruation**

*(Bio)artworks Within a Feminist Occult*

This paper threads together an individual history of transdisciplinary artistic practice that pivots around material, biotechnological, and conceptual applications of blood, particularly menstrual fluid. My practice has utilized textiles, video performance, ritual/symbolism, microbiology and cellular biology in overlapping strategies to produce a series of feminist artworks. When analysed together, these works form a cohesive repertoire of embodied knowledge where craft and science engagements with menstrual (and other) blood inform a phenomenological approach to bioartistic production. In my artistic practice, working somatically within so-called objective sci-tech fields is intentionally transgressive: (re)personalizing research of taboo, innate body materiality can disrupt both art and biomedicine. These fields have traditionally viewed female bodies and their processes as objects to be studied, (mis)represented and/or controlled, and then repackaged and handed back as dictum – often by those who bear little to no lived physical experience. Steering my research outputs towards critique in the form of aesthetic objects serves to generate physical, crafted ‘evidence’ of embodied knowledge, which can challenge externally authoritative modes of knowledge and culture production. When applied to and utilizing personal blood as creative material, the phenomenology of

menstruation becomes a feminist tool for empowerment versus commonly used restrictive taboos. In this paper, I highlight several projects, created between 2003-2023, where the artistic and scientific use of the materiality of blood links back to cultural/technocultural mediations of women's and other nonhegemonic bodies. This is done as both a self-reflexive and wider critical analysis of blood as feminist *materia magica*.

#### NOTES

- 1 Alma Gottlieb has also very recently discussed this example in the context of phenomenology, gender, agency and meaning. For more, see (Gottlieb, 2020, p. 155).
- 2 The originator of these tales is the story of Theophilus of Adana, which inspired *The Tragical History of Doctor Faustus* by Christopher Marlowe (Fryer, 1935, pp. 287-288).
- 3 This moral impurity is associated with Christian notions of Jews in league with the Devil (Fryer, 1935, p. 287).
- 4 For more on the connection between blood, staining, dyeing, tint/taint and moral impurity, see my interview response in (Mackenzie et al., 2022, p. 281).
- 5 Blood increases nitrogen in soil to support plant growth (Yunta et al., 2013). Fertilization makes roses “brighter” (Appleget Hurst, 2023). People sometimes use menstrual blood as fertilizer for plants, including as ritual practice (Grimm, 2014). Purveyors of menstrual cups use the nutrient potential of menstrual fluid for plants to support sale of their products (Hannah, 2020).
- 6 Resonant with this is the later (2017) performance video work, *Cyclus* by Cecile Hübner that connects menstruation with the food cycle by growing seeds with dried menstrual blood as a nutrient powder mixed in soil (de Gelder, n.d.).
- 7 This research was conducted within the Speculative Life BioLab at the Milieux Institute for Arts, Culture and Technology at Concordia University, under my supervision as the lab's technician and Principal Investigator.
- 8 I specify ‘conjectured’ here because there was no existing literature or protocol for use of menstrual blood agar in bacteria culture (Hunter, 2018).

#### BIBLIOGRAPHY

- Buckley, Thomas C. T. and Alma Gottlieb: *Blood magic: The Anthropology of Menstruation*, Berkeley, University of California Press, 1988.
- Camporesi, Piero: *Juice of life: The Symbolic and Magic Significance of Blood*, New York, Continuum, 1995.
- Evans, Jemma, Giuseppe Infusini, Jacqui McGovern, Leila Cuttle, Andrew Webb, Thomas Nebl, Liz Milla, Roy Kimble, Margit Kempf, Christine J. Andrews,

- David Leavesley, and Lois A. Salamonsen: "Menstrual fluid factors facilitate tissue repair: identification and functional action in endometrial and skin repair" in *The FASEB Journal* 33 (1), 2018, pp. 584-605. doi: 10.1096/fj.201800086R.
- Fryer, Alfred C.: "Theophilus, The Penitent, as Represented in Art" in *Archaeological Journal* 92 (1), 1935, pp. 287-333. doi: 10.1080/00665983.1935.10853649.
- Gottlieb, Alma: "Menstrual Taboos: Moving Beyond the Curse" in *Palgrave Handbook of Critical Menstruation Studies*, Chris Bobel, Inga T. Winkler, Breanne Fahs, Katie Ann Hasson, Elizabeth Arveda Kissling, Tomi-Ann Roberts (eds.), Singapore, Palgrave Macmillan/Springer Nature, 2020, pp. 143-162.
- Griffin, Dale, Daniel Kahneman, Thomas Gilovich, Paul Rozin, and Carol Nemeroff: "Sympathetic Magical Thinking: The Contagion and Similarity "Heuristics" in *Heuristics and Biases: The Psychology of Intuitive Judgment*, Cambridge, Cambridge University Press, 2002, pp. 201-216.
- Haraway, Donna C.: "Awash in Urine: DES and Premarin® in Multispecies Response-ability" in *Women's Studies Quarterly* 40 (1/2) Spring Summer 2012, pp. 301-316.
- Hey, Maya, WhiteFeather Hunter, and Emilie St-Hilaire: "Chapitre 3. Horizontal Exchange, Relations, and Resistance in Bioart and Practice-based Research" in *Journal internationale de bioéthique et d'éthique des sciences* 30 (4), 2019, pp. 69-89. doi: 10.3917/jibes.304.0069.
- Hogbin, H. Ian: *The island of menstruating men: religion in Wogeo, New Guinea*, Chandler publications in anthropology and sociology, Scranton, PA, Chandler Pub. Co, 1970.
- Hunter, WhiteFeather: "THE BACTINCTORIUM, LIVING COLOUR, BIOART AND BACTERIA" in *CSPA Quarterly* (21), 2018, pp. 36-52.
- Hunter, WhiteFeather: "Mooncalf: 'Unclean meat'" in *Technoetic Arts* 18 (2-3), 2020, pp. 205-222. doi: 10.1386/tear\_00039\_1.
- Hunter, WhiteFeather and Institutional Biosafety Committee: Unpublished administrative document, The University of Western Australia, 2023.
- Lunenfeld, B.: "Gonadotropin stimulation: past, present and future" in *Reprod Med Biol* 11 (1), 2012, pp. 11-25. doi: RMB20097 [pii] 10.1007/s12522-011-0097-2 [doi].
- Mackenzie, Louise, et al.: "Body Shopping: Challenging Convention in the Donation and Use of Bodily Materials through Art Practice" in *Technoetic Arts* 18. Taboo-Transgression-Transcendence in Art & Science, 2020, pp. 279-297.
- Menely, Tobias and Margaret Ronda: "Red" in *Prismatic Ecology*, Jeffrey Jerome Cohen (ed.), University of Minnesota Press, 2013, pp. 22-41.
- Meyer, Melissa L.: *Thicker Than Water: The Origins of Blood as Symbol and Ritual*. London, Routledge, 2014.
- Maor Roguin, Noga, Ariel Roguin and Nathan Roguin: "Medieval Roots of the Myth of Jewish Male Menstruation" in *Rambam Maimonides medical journal* vol. 12, 4 e0033. 25 Oct. 2021, pp. 1-6. doi:10.5041/RMMJ.10454.

- Parker, Rozsika: *The Subversive Stitch: Embroidery and the Making of the Feminine*, London, Bloomsbury Visual Arts, 2019.
- Vostral, Sharra Louise: *Under Wraps: A History of Menstrual Hygiene Technology*, Lanham, Lexington Books, 2008.
- Wyatt, K. A., C. E. Filby, M. L. Davies-Tuck, S. G. Suke, J. Evans, and C. E. Gargett: “Menstrual fluid endometrial stem/progenitor cell and supernatant protein content: cyclical variation and indicative range” in *Human Reproduction* 36 (8) (2021), pp. 2215-2229. doi: 10.1093/humrep/deab156.
- Yang, Heyi, Bo Zhou, Mechthild Prinz, and Donald Siegel: “Proteomic analysis of menstrual blood” in *Molecular & cellular proteomics: MCP* 11 (10), 2012, pp. 1024-1035. doi: 10.1074/mcp.M112.018390.
- Yunta, Felipe, Michele Di Foggia, Violeta Bellido-Díaz, Manuel Morales-Calderón, Paola Tessarin, Sandra López-Rayó, Anna Tinti, Krisztina Kovács, Zoltán Klencsár, Ferenc Fodor, and Adamo Domenico Rombolà: “Blood Meal-Based Compound. Good Choice as Iron Fertilizer for Organic Farming” in *Journal of Agricultural and Food Chemistry* 61 (17), 2013, pp. 3995-4003. doi: 10.1021/jf305563b.

#### WEBSITES

- 23andMe: *Find out what your DNA says about you and your family*, <https://www.23andme.com/en-int/> (accessed March 26, 2023).
- Appleget Hurst, Susan: *Here's When to Fertilize Roses for Bigger, Brighter Blossoms*, February 22, 2023, <https://www.bhg.com/gardening/flowers/roses/feeding-roses/> (accessed March 26, 2023).
- Bates, Tarsh: *The Unsettling Eros of Contact Zones*, 2015, <https://tarshbates.com/portfolio/t-he-unsettling-eros-of-contact-zones-2015/> (accessed November 16, 2023).
- Capricorn Scientific: Horse Serum and Donor Horse Serum, [https://www.capricorn-scientific.com/capricorn/documents/product%20information/Sera/Product%20Info\\_HOS\\_DHS\\_V000.pdf](https://www.capricorn-scientific.com/capricorn/documents/product%20information/Sera/Product%20Info_HOS_DHS_V000.pdf) (accessed April 13, 2023).
- de Gelder, Irene: Connecting the Menstruation and Food Cycle, <https://www.media.matic.net/nl/page/367865/connecting-the-menstruation-and-food-cycle> (accessed April 12, 2019).
- Gillen, Alan L., and Rebecca Gibbs: *Serratia marcescens: The Miracle Bacillus*, 2011, <https://answersingenesis.org/biology/microbiology/serratia-marcescens-the-miracle-bacillus/> (accessed April 17, 2023).
- Grimm, Beca: I Fertilized My Salad with Period Blood, July 30, 2014, <https://www.vice.com/en/article/4w77pj/i-fertilized-my-salad-with-period-blood-0000400-v21n8> (accessed March 26, 2023).
- Grosz, Elizabeth: “Menstruation Machine (Sputniko!)”, April 9, 2014, Design and Violence. <https://www.moma.org/interactives/exhibitions/2013/designandviolence/menstruation-machine-sputniko/> (accessed November 16, 2023).

- Hannah, L.: *Can you fertilize your plants with period blood?*, May 18, 2020, <https://www.pixiecup.com/blog/can-you-fertilize-your-plants-with-period-blood/> (accessed March 27, 2023).
- High, Kathy: *Red Scare*, 2003, <https://www.kathyhigh.com/projects/soft-science/> (accessed November 16, 2023).
- Kaur, Rup: *7 years ago during women's history month i took this photo for a university project where i was tackling stigmas around menstruation. i shared it on instagram in 2015...*, March 7, 2023, Edited by @rupikaur\_. Instagram: <https://www.instagram.com/p/Cpd-aUYJoUc/?igshid=YmMyMTA2M2Y=> (accessed March 7, 2023).
- Maggic, Mary: *Open Source Estrogen*, 2015, <http://maggic.ooo/Open-Source-Estrogen-2015> (accessed November 16, 2021).
- Marsh, Jeffrey: *Let's work together #lgbtq #nonbinary #tampons #feminism #politics #trans #gender #womensrights*, 9 December 2022, Edited by @thejeffreymarsh: TikTok, <https://vm.tiktok.com/ZMY5n5B3G/> (accessed March 9, 2023).
- Moreland, Quinn: *Forty Years of Carolee Schneemann's "Interior Scroll"*, August 29, 2015. <https://hyperallergic.com/232342/forty-years-of-carolee-schneemanns-interior-scroll/> (accessed April 3, 2019).
- Mulvaney, Dylan: *Episode 14 | Day 271- the great tampon debacle of 2022 #trans*, December 8, 2022. Edited by @dylanmulvaney: TikTok, <https://vm.tiktok.com/ZMY5WxCte/> (accessed March 9, 2023).
- Richard, Jeremie: *Activists see red over Iceland's blood mares*, October 2022, <https://phys.org/news/2022-10-activists-red-iceland-blood-mares.html> (accessed March 24, 2023).
- Rosner, Isabella: "I plunge headlong into disaster": Unstitching Agnes Richter's Jacket, 2021, *The Polyphony*. <https://thepolyphony.org/2021/09/02/i-plunge-headlong-into-disaster-unstitching-agnes-richters-jacket/> (accessed April 18, 2023).
- Sputniko!: *Menstruation Machine - Takashi's Take*, 2010, <http://sputniko.com/2011/08/menstruation-machine-takashis-take-2010/> (accessed March 14, 2023).
- The Cheeky Mum: *#stitch with @Mama Rose your tiktoks do not help the trans community and come across as misogynistic gaslighting... i would have thought a rethink to your approach would be good idea if you want to reduce hate! #trans #transwomen #periods #menstrualcycle #menstruation #fyp*, February 12, 2023, Edited by @robynrt: TikTok, <https://vm.tiktok.com/ZMYuFeDfX/> (accessed March 14, 2023).
- Torres, Roberto: "Meet the Engineered Lovesick Virus That Spreads Kindness and Empathy", February 14, 2019, *Technical.ly*. <https://technical.ly/startups/meet-the-engineered-lovesick-virus-that-spreads-love-kindness-and-empathy/> (accessed November 16, 2023).
- Yager, Sarah: "Weeping of a Disappointed Womb", October 2, 2013, *The Atlantic*, <https://www.theatlantic.com/health/archive/2013/10/weeping-of-a-disappointed-womb/280166/> (accessed November 9, 2023).

Young-Powell, Abby: "Iceland urged to ban 'blood farms' that extract hormone from pregnant horses", May 16, 2023, *The Guardian*, <https://www.theguardian.com/environment/2022/may/16/iceland-urged-to-ban-blood-farms-that-extract-hormone-from-pregnant-horses> (accessed March 24, 2023).

Zaya: *Replying to @not.maria1 Trans women don't get periods. Period. #trans #mtf*, February 16, 2023, Edited by @zayaperysian, <https://vm.tiktok.com/ZMYuNHovE/> (accessed March 14, 2023).