"Thank you for the Nurture": Kinship and Technological Posthumanism in *Orphan Black*

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Introduction

In recent years, a growing volume of literature, film, and TV has explored the eradication of reproductive autonomy through the genre of science fiction (SF) (Dillon 2020, 169). Sarah Dillon characterises this current 'resurgence of feminist dystopian imaginings' as a 'tidal wave', largely functioning as a response to the recent and ongoing changes to reproductive legislation within the Anglophone West (Ibid.). Of these creative outputs, Bruce Miller's adaption of *The Handmaid's Tale* (2017) is undoubtedly the most notable – the series' cultural influence oversaw the spawning of hundreds of protests in the United States, with scarlet cloak-clad activists protesting the drastic changes made to abortion legislation from 2019 onwards (Boyle 2020, 845-870). Also explicitly foregrounding several feminist discourses on reproductive justice is the Canadian SF thriller *Orphan Black,* garnering not only widespread critical acclaim after débuting in 2013, but also a devoted fanbase: the #CloneClub (Abbott 2018, 157-158). Drawing on a variety of contemporary reproductive debates – such as the ethicality of surrogacy tourism and the embryonic selection of 'designer babies' –
Orphan Black offers valuable contributions to the modern dystopian canon, articulating the potential dangers of unregulated biotechnologies operating under structures of patriarchal capitalism.

Indebted to the works of Charles Darwin and H. G. Wells, *Orphan Black* pays homage to its literary and scientific predecessors throughout the series, their significance explicated by the character Cosima Niehaus, an evolutionary biologist. The series commences when the protagonist, a British grifter named Sarah Manning, sees a woman she presumes to be her long-lost sister, Beth Childs, take her life in front of an oncoming commuter train. After stealing her identity, Sarah discovers that she and Beth are just two of many clones. Sarah then becomes quickly tasked with regaining her freedom from the very state and capitalist forces that created her. As the threat of those forces becomes increasingly imminent, the clones – or *sestras* as they are referred to by clone Helena – become reliant on their ever-expanding familial network to fight against them. The exploitations of biopower that *Orphan Black* depicts are already familiar to its audience as the program offers a real-time consideration of unregulated biotech; shady corporations, the military, and puritanical religions are *Orphan Black*'s systemic antagonists that exert control over 'women's reproductive capacity', conduct 'covert surveillance of [the clones'] health, including [their] sexual lives', and use 'an infertility plague as a bioweapon' (Rushing 2018, 148). Centred on a narrative of female liberation, the series follows the sinister biocapitalist organisation the Dyad Institute and its attempts to govern and exploit its subjects' reproductive properties, primarily focusing on Ukrainian assassin Helena, soccer mom Alison Hendrix, PhD student Cosima, and Sarah, all of whom are played by actress Tatiana Maslany. As Dyad's ultimate goal is achieving total control over the clones' bodies, their reproductive systems, vitality, and life itself, the *sestras* fight to emancipate themselves from the institute that not only claims ownership of them but is also responsible for their creation (Agamben 1995, 146, 150, 156).

References to Charles Darwin's legacy are present throughout *Orphan Black*, from the first season's episode titles, each derived from chapters of his seminal work *On the Origin of Species* (1859), to the show's constant engagement

with the nature vs. nurture debate. Regularly inviting its audience to question whether we are products of our environment or our biology, *Orphan Black* reconceptualises the traditional meaning of family throughout its five-series tenure. Aligning this ambition with an explicit commentary on the largely unregulated Assisted Reproductive Technologies (ARTs) industry and capitalism, the series also attempts to recontextualise the future of the bio-family in our posthumanist epoch, asking what philosophies drive our obsession with biological reproduction. In addition to its fixation on biology and genetics, *Orphan Black* also delves deeply into explorations of family and kinship. Throughout the program, viewers are shown a wide array of non-nuclear familial structures and modes of kinship created through surrogacy, fostering, adoption, biology, and choice. Although much of *Orphan Black*'s narrative is dedicated to exploring modes of infertility and restricted reproductive autonomy, its reconceptualization of the nuclear family emboldens new imaginings of family-making and kinship.

While the series' early depiction of families inadvertently overstates the significance of shared genealogies within kinship structures, this paper is predominantly concerned with *Orphan Black*'s complete overarching narrative and how the later seasons attempt to rectify these earlier inconsistencies. Often in explicit dialogue with one another, *Orphan Black* decisively surveys two non-traditional modes of family making: the chosen family and families of genetic kin who reconnect with one another in adult life. For queer families, both have become pivotal tools to establish new networks of sociality and kin, their popularity having exponentially increased in recent years as explored extensively in anthropological scholarship (Andreassen 2022, 1). Here, queerness exists not just as a mode by which individuals define themselves and their sexual orientation, but also as a way to seek and build kinship structures with others. Featuring numerous LGBTQ+ characters, *Orphan Black* also explicitly foregrounds queerness as a new mode of kinship by which to not only deconstruct the cis-heteropatriarchal tradition of the nuclear family but to 'create novel social arrangements that challenge normative assumptions in multiple domains' (Casey and Clayton 2021, 125).

While recognising the implications of state control and violence over reproductive bodily autonomy, *Orphan Black* also identifies the possibility of ARTs as a methodology to build 'new solidarities' between gestational labourers and queer families (Smietana, Thomson, and Twine 2018, 120). Consolidating the critical studies of queer kinship and reproductive justice, this paper seeks to demonstrate how *Orphan Black* – especially in later series – has the potential to exemplify José Esteban Muñoz's notion of queer utopianism and Kath Weston's ideas of the family created by choice. By aligning queer kinship with Muñoz's understanding of 'queerness as utopian formation [..] based on an economy of desire and desiring', this paper invokes his suggestion of queer relationality's 'utopian potentiality' and 'encrypted sociality' as a theoretical framework by which to discuss *Orphan Black* (2009, 6-7).

Also crucial to this paper is a deconstruction of Lee Edelman's argument that queerness is a 'figural status as resistance to the viability of the social', contextualised alongside Muñoz's critique of Edelman's *No Future: Queer Theory and the Death Drive* (2004, 3). *Orphan Black,* instead, rejects Edelman's proclamation 'that queerness names the side of those not ''fighting for the children''' by showing queerness' potential for creating new modes of kinship and care beyond the heteronormative tradition of the nuclear family (Ibid.). However, insofar as emphasising ARTs' capabilities for making kin, this paper also interrogates their exploitation under capitalism and use by the state. Viewing *Orphan Black*'s

posthumanist sensibility as an exploration of humanity and technology, this paper seeks to explore the potential implications of ARTs as kin-making tools, both positive and negative. By articulating the posthumanist potentiality of these technologies, this paper argues that *Orphan Black* raises as many questions as it may answer, ultimately tentative in its conclusive stance on the ethicality of ARTs and the families that these technologies may create.

(Un)Natural Selection: Eugenics and Edelman's Child

Before turning to a critical analysis of *Orphan Black*'s portrayal of kinship, it is essential to contextualise the show's critique of biotechnology's implementation under capitalism – and in particular, our cultural fixation with using it to reproduce biological kin. As argued by Edelman in his polemic, 'we are no more able to conceive of a politics without a fantasy of the future than we are able to conceive of a future without the figure of the Child' (Ibid., 11). The Child, as Edelman contends throughout *No Future*, is a symbolic tool of political discourse, integral to not only our creation of *the* future but an *optimistic* future. The future is a promise to be built upon new, and presumably better, bare life in what Edelman terms 'reproductive futurism'; the perfect infant thus becomes a *tabula rasa* on which we can construct narratives of our desired futures and a project of our own fantasies (Ibid.). The technological reproduction of biological kin is one way to ensure not only this kind of futurity but a futurity which ensures an extension of the self as understood through Rosi Bradotti's reasoning of analytic posthumanism, which raises 'crucial ethical and conceptual questions about the status of the human' (2013, 39). Concurringly, Elias Canetti writes that humanity 'not only want[s] to exist for always, but to exist when others are no longer there', and it is through the Child that man may 'live longer than anyone else, and to know it; and when he is no longer there himself, his name must continue' (as quoted in Baudrillard 2000, 87). The visage of this dream Child, however, requires extensive questioning. What makes a child desirable? And what kind of children do we hope to bring into this world? As is the nature of reproduction, the Child is often intended to be a replication of our own image; a product of 'somatic capital'. And here lies one of Edelman and his contemporaries' most significant critiques of reproductive futurism (Sheldon 2013, 1-3).

As defined by Rebekah Sheldon, 'somatic capitalism' functions as 'the intervention into and monetization of life itself', accounting for the specific conjunction of material and literal value that the Child may possess (2016, 118). By this logic reproduction is only incentivised when the 'social good appears co-terminus with human futurity', signifying 'an expression of the move from state biopolitics with its rhetoric of concern to neoliberal speculation' (Ibid.). *Orphan Black*, as surveyed throughout this paper, cautions against the growing conjunction of somatic capitalism and unregulated biotechnological industries as a means of reproductive futurism. Current scholarly writing on kinship and the influence of ARTs is often equally as divisive; while some critics propose that ARTs have irrevocably 'changed our understandings of relatedness', others claim that 'their utilization is strongly shaped by traditional kinship ideas' (Levine 2008, 381). In cases where third parental parties are introduced, such as egg or sperm donors, concerns for the implications of ARTs are shaped by the '[un]naturalness of the reproductive process', possibly 'rendering biological or blood ties immaterial' (Taylor 2005, 190). With such a cultural fixation on blood, biology, and heritage, the ART Child can often function as a clone of its parents, selectively replicating their 'desirable' genetic qualities. As these technologies grant godlike control over embryonic and

future life, humanity now has the potential to create children in exactly our own image – *imago dei* at an embryonic level (Genesis 1:26:27).

Aligning heterosexuality with futurity, reproduction, and children, Edelman describes 'the rejection of futurity as the meaning of queer critique' (Caserio, Edelman, Halberstam, Muñoz and Dean 2006, 823). Advocating for a 'relentless form of negativity in place of the forward-looking, reproductive, and heteronormative politics of hope' (Ibid.), Edelman contends that such an assertion against futurity is achieved in the denial of fantasy, 'refusing the promise of futurity', and 'exposing reality's seamlessness as mere meaning' (2004, 33-67), thus rendering the Child meaningless (Freccero 2006, 332). Consequently, Edelman presents the image of the Child as a necessary symbolic function for conceiving of the future while aligning queerness's rejection of (heterosexual) reproductive futurity as an enactment of the death drive's antisociality (2004, 35). The absence of the biological Child thus exposes the fragility of our own temporality, the hierarchy of our present social structures all too pervious to destruction, their instability reliant on the power exerted and maintained by those with greater social capital (2013, 18).

Enter *Orphan Black*, a show about the ethics of cloning. As with *Orphan Black*'s clone-concerned predecessors like Kazuo Ishiguro's *Never Let Me Go* (2005), the technology that exists and the ethical questions they raise 'are no longer merely the stuff of [SF] extrapolation but represent more-than-metaphorically biopolitical realities' (Vint 2017, 96). Metatextual by nature, the series draws explicit attention to its cultural influences, from the appearance of the fictional Huxley Station as a nod to evolutionary anthropologist Thomas Henry Huxley and *Brave New World* author Aldous Huxley, to later referencing the likes of Donna Haraway and H. G. Wells.

While Haraway contests the label of a posthumanist, her work has invaluably shaped feminist posthumanist thinking, questioning the 'hierarchical dualisms' (2016b, 13, 97) between 'mind and body, animal and human, organism and machine, public and private, nature and culture, men and women, primitive and civilized' (2006, 119). Deriving each of its fourth series' episode titles from Haraway's oeuvre, *Orphan Black* similarly interrogates these dichotomies recalling the language of *A Cyborg Manifesto*'s posthumanist sensibility. The *sestras*, engineered in a laboratory and the project of 'patriarchal capitalism', embody the self-awareness that plagues other narratives of techno-humans (Ibid.). *Orphan Black*, however, goes a step beyond the conventions of the SF tradition by vitalising discourses of biotechnological ethics. While SF is frequently disseminated into narratives of technology *or* biology, *Orphan Black* unambiguously depicts how the two are becoming inextricably intertwined. This signifies, in Haraway's terms, how 'every technology is [a] reproductive technology', fundamentally changing the ways in which humanity interacts with itself (2016b, 115). The *sestras* are at once self-aware techno-human capitalist projects akin to androids and also, as playfully referenced throughout the series, cloned biological organisms analogous to Dolly the sheep (Belton 2020, 1217). Bolstering the emancipatory politics of family abolitionism, Haraway's cyborg 'does not dream of community on the model of the organic family' (2006, 119). Under the cover of neoliberal capitalism, the nuclear family underscores a nexus of cultural, political, and economic issues; essential forms of labour – like motherhood and childrearing – become privatised modes of work centred around individuals rather than communities. Sophie Lewis' *Abolish the Family: A Manifesto for Care and Liberation* offers a contemporary perspective on Marx and Engels' progenitive project of family abolition, calling for communal childcare and abolishing the fractured nature of the insular nuclear family (Lewis 2022). However, procuring the language of solidarity and activist organising, Lewis

calls for acts of 'caring, sharing, and loving' to extend beyond the boundaries of those we consider kin (Ibid., 67). 'It's time to practice being kith or, better, comrades— including toward members of our "biofam",' she writes, 'building structures of dependency, need, and provision with no kinship dimension' (Ibid., 66). For family abolitionists like Lewis, the project is centred as much on disseminating care as it is a reconsideration of our fixation with biological kin and the Child.

The political rhetoric of eugenics and that of the nuclear family have long been conflated and intertwined, often indecipherable from one another. Elected midway through *Orphan Black*'s production, former President Donald J. Trump and his 'Make America Great Again' campaign, intransigent anti-abortion advocacy, and Immigrant and Customs Enforcement's unlawful sterilisation of migrants, followed approaches of 'eugenicists and politicians in the 1920s and 1930s' (Currell 2019, 291). Preceding this, the Immigration Restriction Act of 1924 limited the number of migrants who could enter the United States. Its reasoning was summarised by Representative Robert Allen of West Virginia, who stated that 'the restriction of the alien stream, however, is the necessity for purifying and keeping pure the blood of America' (as quoted in Ludmerer 1972, 106). Conversely, from the series' inception, *Orphan Black* demonstrates the permeability of eugenicist philosophies on several scales.

Of course, it is also important to note here that while the series is set in the Toronto area – even if this is never explicitly stated – *Orphan Black* relies heavily on a cultural backdrop of North America that obfuscates vital political and legal differences between the US and Canada. As Ieman M. El-Mowafi et al. crucially note, these obscurities imbue Canada 'with a false impression of egalitarianism' while the cruel reality of inequity, injustice and racism is rampant within the Canadian sexual and reproductive health and rights realm' (2021, 1). Although El-Mowafi et al. identify discrimination against Black and Indigenous communities as a key aspect of reproductive injustice in Canada, *Orphan Black* omits this reality from its narrative almost entirely, further exacerbating the issue of homogenising racial and gendered experiences across North America (Ibid.). Since the series concluded in 2017, these cross-cultural differences have only become more pronounced, thus inviting a necessary further inquiry in future spin-off and tie-in material that has been proposed.

Interconnecting the series' antagonists is 'Neolutionism', a movement described by villain Dr Aldous Leekie in a proselytizing speech as 'a philosophy of today for tomorrow. Rooted in our past, in the evolution of the human organism' (Variations Under Domestication, 2013). Reminiscent of the post-Darwinian late 19th-century eugenics movement, Neolutionism's focus on self-directed evolution sees its followers modify themselves through biohacking and other such futuristic body modifications. Spearheading Neolutionism is the Dyad Institute, the biocapitalist corporation responsible for Sarah and the other Leda clones' creation. Throughout the series, clone and Dyad CEO Rachel Duncan attempts to create more clones, going to extreme – and often violent lengths – to surveil, test, and experiment on her fellow *sestras* in hopes of creating a new line of Leda subjects. Elsewhere, the Dyad-owned BrightBorn Industries operates as an experimental surrogacy practice promising its clients perfect, 'enhanced' babies without the hassle of carrying the children themselves. While the narrative of *Orphan Black* is unyielding in its moral condemnation of reproductive biotechnologies as a capitalist exploit, the show also demonstrates how ARTs hold equal potential for kin-making, but only in conjunction with larger family abolitionist ambitions.

Endless Forms Most Beautiful: Queer Kinship as Reproduction

While many contemporary SF TV shows – such as the aforementioned *Handmaid's Tale* – often explicitly direct viewers into forming particular moral judgements, *Orphan Black* relies on an ambivalent portrayal of ARTs and biotechnologies and, at times, this depiction risks obscuring a cohesive message across the series. One storyline focuses on Cosima – a developmental evolutionary biologist – and her attempts to cure her hereditary illness before she or any of her other *sestras* become further afflicted. In this instance, the ethics of genetic engineering go unquestioned until harvesting bone from Kira, Sarah's biological daughter. Comparatively, the fourth series follows the *sestras* as they uncover the mystery of BrightBorn, a fertility clinic and surrogacy service. In the episode 'Human Raw Material' (2016) Cosima learns that BrightBorn is secretly experimenting on embryos resulting in excruciatingly painful labour for surrogates and disabled children who are then swiftly euthanised. While depicted as morally dissimilar, both plots raise a vital question: To what extent is it right to use another's body for our own ends?

A debate that has long plagued bioethicists, recent technological and legal developments have shed light on the potentially troubling relationship between surrogates and their class, race, and gender. In 2012, Seema Mohapatra published a comprehensive bioethical survey on international commercial surrogacy, poignantly noting that 'truth is often stranger than fiction, and nowhere is this more evident than when examining real stories from international commercial surrogacy that have occurred in the last few years' (412). The unregulated imperial expansion of ART-centric services has garnered extensive criticism from feminist scholars – such as Mohapatra, Smietana, Thomson, and Twine – and activists who have called for greater regulation of such a profit-driven industry. In particular, the problem of a stratified reproduction and/or a 'reproductive caste system' highlights the potential gestational difference between those who have the financial means to access ART during pregnancy (Roberts 2009, 783). As Dorothy Roberts contends, these technologies have been historically 'directed at developing eugenical population control strategies, especially for low-income and poor women of colour globally' while 'reproduction enhancement options under the rubric of "choice"' are reserved 'for economically and racially privileged women in the global North' (Ibid., 789).

In the *Dialectic of Sex*, Shulamith Firestone similarly raises concerns about ARTs' potential to subordinate women as well as liberate them, particularly when such technologies further aid the creation of nuclear families (1970, 179). Integral to the reproductive justice movement, women and gender non-conforming people of colour began to discuss these inequalities in 1994 at the Conference on Population and Development in Cairo. Unable to 'defend the needs of women of colour', 'trans people', and 'other marginalised women', the Women of African Descent for Reproductive Justice recognised the necessity of an international movement that could 'uplift the needs of the most marginalized women, families, and communities' (Reproductive Justice). Utilising the human rights framework established by the United Nations to create a social justice movement centred on reproductive rights, defining reproductive justice as 'the human right to maintain personal bodily autonomy, have children, not have children, and parent the children we have in safe and sustainable communities' (Ibid.). Rather than abhorring all ARTs, the movement was instead concerned with how it may aid reproductive autonomy and contribute to the quality of life for all pregnant people.

Amalgamating the theoretical frameworks of stratified reproduction, queer kinship, and reproductive justice, contemporary biomedical scholarship has begun

to focus on how queer couples may approach surrogacy as a collaborative project should the surrogate wish to be involved in the child-rearing themselves. In her paper 'Symposium-Making Families: Transnational Surrogacy, Queer Kinship, and Reproductive Justice', Jenny Gunnarsson Payne suggests that 'surrogacy contracts should always include the possibility of 'queer kinship', advocating for shared custody between the surrogate and commissioning parents (2018). In doing so, she proposes a queerfeminist approach to surrogacy 'where the linear nuclear conflict between the kinship grammar of gestation and the kinship grammar of parental intent is solved by acknowledging multilineal parental kinship constellations' (Ibid.). Unlike Edelman, who paints queer life as anti-relational, analogous to a 'rejection of futurity' (Caserio, Edelman, Halberstam, Muñoz and Dean 2006, 823), *Orphan Black* and the choice of collaborative parenting in surrogacy arrangements align queerness and the multimodality of kinship as the very tool by which to construct these new familial structures. By recognising the conjunctive potential of ARTs and queerness as kin-creating tools, we may better understand Muñoz's embrace of queer kinship as a mode of utopian formation.

Let us return to *Orphan Black*. The series' introduction to Sarah quickly acquaints viewers with her unconventional family, consisting of Felix, her foster brother, her foster mother Siobhan Sadler whom she and Felix often refer to as 'Mrs. S', and her biological daughter Kira who has been left with Siobhan. Felix, who is a queer man and one of the few members of the *sestrahood* without any genetic ties to Sarah, exemplifies an 'identit[y]-in-difference', a term used by Muñoz to highlight individuals who 'emerge from a failed interpellation within the dominant public sphere', thus contributing 'to the function of [their own] counterpublic sphere' (1999, 40). As a secondary character, existing scholarship on *Orphan Black* has critically overlooked Felix's contributions to the overarching narrative, chiefly in his role as an identity-in-difference. For Dillender, Felix highlights the series' troubling tendency to proliferate a biological foundation for a family through the frequent side-lining of his character once more *sestras* are introduced (2018, 408). Although Dillender's argument rings true, she also overlooks how Felix's dialogue does, in fact, offer the most explicit denotation of how the *sestrahood* and his comprehension of the family are changing, expanding, evolving, and adapting.

In contrast to Edelman, who suggests that 'queerness exposes the obliquity of our relation to what we experience in and as social reality', *Orphan Black* signifies queerness's inherent relational potential through Felix by the linguistic structures he uses to refer to his extended family (2004, 6-7). For most of the series, Sarah and Felix fluctuate between calling one another siblings and foster siblings. Implicitly suggesting that the fostered aspect of their relationship is irrespective of their closeness, Felix similarly oscillates between referring to his foster mother as 'Mrs S.', 'Siobhan', and 'mum'. The third season episode 'Insolvent Phantom of Tomorrow' (3.9) uncovers that the original Leda clone is Siobhan's mother Kendall, a chimera who absorbed her male twin in the womb thus leaving her two separate sets of DNA, meaning Sarah is technically Siobhan's genetic aunt. Despite this revelation, the language Felix and Sarah begin to use relationally affirms their status as a 'proper' family, consistently referring to Siobhan as their mother. While this shift ultimately rejects traditional ideas of families centred on biology, their reluctance to use legitimate familial language beforehand implicates the (non-biological) chosen family as somehow inferior to those with a shared genealogy.

This sentiment of choice, evoking Weston's mediation on chosen families in *Families We Choose* (1991), centres autonomy and love as driving forces in kin-making, ideas which are also particularly prevalent within queer families. While

Families continues to be a fundamental text in studies of queer kinship, Weston's empirical research, undertaken three decades ago, dismisses biology's capability in creating new modalities of queer kinship itself. Weston defines biology as a mode of heterosexual reproduction, suggesting that 'families we choose are defined through contrast with biological or blood family, making biology a key feature of the opposing term that conditions the meanings of gay kinship' (1997, 211). *Orphan Black*, however, demonstrates the correlated potentiality of biology and queerness in creating familial networks themselves. Searching for his own biological family, Felix tracks down his half-sister Adele through the fictional software 'GeneConnexions' in the fourth series. While this paper has already touched upon new critical advocacies of potential parental collaboration surrogates and queer couples, a growing volume of research has surveyed how the internet is facilitating new modalities of queer kinship and queer reproduction in its own right since the publication of *Families*. Recontextualising Weston's work, Rikke Andreassen's paper, 'From the families we choose to the families we find online: media technology and queer family making', draws on 'empirical examples of media practices of kinning, such as online shopping for donor sperm and locating "donor siblings"' (2022, 1). Andreassen, as does Weston, centralises choice as a factor in donor sibling outreach, noting that 'with today's ART and media technology, contemporary chosen families can be formed via biological connections. Both types of families emphasise family making outside traditional frameworks, driven by choice' (Ibid., 8-9).

As Felix's decision to find Adele may be characterised by choice, the close bonds and interconnectedness of the *sestrahood* may also be thought of as such. For Felix and Sarah's extended families, biology is portrayed as the catalyst that unites them, while choice remains the force that bonds them. Central to *Orphan Black* is its advocacy of nurture's importance over nature in kin-making. Echoing Darwin's infamous debate, Felix offers a speech at his art show in 'Guillotines Decide' (2017), proclaiming that 'we are mysterious works of chance, a choice of nature vs. nurture. So, to my galaxy of women, thank you for the nurture' (2017). This exhibition – as does most of his art throughout *Orphan Black* – explores the miscellany of the *sestras* personalities and appearances despite their identical genealogy. It is also through the development of Adele's relationship with Felix and Sarah that *Orphan Black* portrays consent and knowledge as central to the process by which kin are made and familial networks are created. Sarah initially resists Adele's introduction to their family alongside Mrs S. and Kira, telling Felix that genetics alone do not make a family. Although Sarah's world is one of an ever-expanding family and evermore complex genetic relationships, *Orphan Black* shows that Sarah's conception of family is still threatened by the biological illegitimacy of the relationship she has with her brother. For Sarah, Adele is only considered family once Mrs S. tells her about the other Leda clones and Dyad, inducting Adele into the folds of the *sestrahood* as Sarah once was. Through this knowledge exchange, Adele's relationship with Felix becomes interpersonal as well as biological.

While the show offers a certain inconsistency on moral discourses such as the ethics of surrogacy, *Orphan Black* overtly postulates nurture's importance in numerous ways. The first is Maslany's performance itself, a distinctive fusion of both emotive and technical acting that avoids overreliance on wigs, make-up, and costuming to distinguish between each character. To seamlessly embody various clones in a single scene, Maslany's movements are captured on a TechnoDolly, which 'allows complicated camera motion to be duplicated with great precision

by repeating a computer-programmed sequence of movements as many times as necessary' (Bell 2018, 29). For Hilary Neroni, the power of nurture is also found in *Orphan Black*'s 'endlessly shifting' portrayal of femininity, arguing that 'rather than being completed biological individuals, these women [...] bring to light the excess of subjectivity, which cannot be biologically mapped or quantified' (2018, 122). Neroni also argues that, beyond their physical appearance, the *sestras'* varied sexual and gender identities are another way *Orphan Black* explicitly indicates their individualism: Cosima is a lesbian, Sarah is bisexual, and Tony Sawicki is a trans clone who kisses Felix. Of course, here it is also important to recognise that the decision to cast a cisgender actress to play a trans character inadvertently undermines the important work done by the series in terms of its portrayal of various forms of queerness. Sheldon also affirms this, suggesting that Tony's portrayal by Maslany risks taking 'advantage of a trendy topic without giving the character his due or respecting the diversity of the trans experience' (2018, 385). While within modern contexts of contemporary transgender depiction on television Maslany's performance would rightly be called into question, Tony's purpose within the broader narrative further illustrates the queerness of *sestrahood* and Muñoz's evocation of queerness' encrypted sociality. By transgressing the conventions of heterosexual kinship modalities, *Orphan Black* offers queer models of family as the *sestras* may care for each other and be cared for themselves, and in Everett Hamner's terms, paints 'all of its clones as figuratively queer' (2018, 412).

If *Orphan Black* proposes these queer modalities as central to building new modes of kinship, Rachel exists as a product of 'failed nurture' (Seibel 2022, 168). After (incorrectly) learning her adoptive parents Ethan and Susan have died in a lab explosion, Rachel is then raised by Dr Leekie as a child of Neolution under its patriarchal capitalist ideology, transforming her into an 'aloof, calculating, corporate executive persona' and a 'power-hungry, detached woman' (Walderzak 2018, 154). Recalling Edelman's notion of reproductive futurism, Rachel's origin affirms the structure of a desirable social order, inheriting the characteristics of the dream Child and its eugenic potential as implicit through the Neolutionist agenda. *Orphan Black*'s makeup artist Stephen Lynch describes Rachel's character design in similar terms, claiming that she possesses 'this almost European, beautiful, endless spa treatment look' and requires the longest time of any clone for Maslany to transform into (as quoted in Stutsman 2016, 95). Despite embodying the politics of biological futurity, Rachel is rejected from the *sestrahood*, unable to literally or figuratively reproduce. As Buket Akgün notes that Sarah is 'reminiscent of Braidotti's critical posthuman subject' (2019, 55) through her 'enlarged sense of inter-connection between self' (Braidotti 2013, 49) and the *sestrahood* in contrast to Rachel's 'self-centred individualism' (Ibid., 50), they offer a form of queer oppositionality to her antagonism. In doing so, the *sestras* reject Edelman's hypothesis of antisociality by reproducing through kinship structures instead.

A Conscious Selection: Kinship as Consolidation
As Weston notes, kinship is most often defined by care. *Orphan Black* similarly bolsters interpretations of kinship that position care as an act as much as it does a bond. Central to the act of kinning is consolidation, creating and maintaining communal relations through the expression of that care itself. Weston also argues that choice itself is not enough to create new lineages of kinship, particularly when chosen families are structured after 'biological models' such as adoption, which *Orphan Black* elucidates through an exploration of numerous chosen families, many

of whom the *sestras* reject or are eventually rejected from themselves (1997, 34). Upon discovering his survival, Rachel imprisons her adoptive father Ethan Duncan at the Dyad Institute, forcing him to watch videos of them together when she was a child. When Ethan asks, 'Do you recall, Rachel, not the memory, but the feeling of how much we loved you?', Rachel coldly replies: 'The reason I watch these tapes so often is because I don't remember at all' (By Means Which Have Never Yet Been Tried, 2014). Following this exchange, Ethan takes his life to prevent Rachel from obtaining a genetic code to create more Leda clones. He cries for his 'poor, poor Rachel', lamenting the child he once knew and rejecting who she has become after faking his death. As Rachel sobs, 'You cannot leave me again', Ethan tells her, 'I'm afraid you don't deserve me anymore' (Ibid.). Although the two are unrelated by blood or biology – the very underpinnings of the Neolutionist movement – Ethan's death underscores the fragility of familial structures without the consolidation of mutual care.

Rachel's characterisation further dispels Edelman's encryption of heterosexuality with an inherent social potential. Created as the ideal of somatic capitalism, Rachel learns in 'Variable and Full of Permutation' that she is 'barren by design' (2.8), unable to fulfil her societal imperative of reproducing and mothering (2014). Her volatile response to learning this affirms Dyad's treatment of reproduction as a (cis)heteropatriarchal project, naturalising 'womanhood on the basis of cisgender anatomical bodily functions' and further enforcing archetypes of nuclearized familial structures (Zisman 2022). Sarah and Helena, by contrast, are the only fertile Leda clones, becoming mothers by accident – Sarah through an accidental pregnancy, Helena through forced IVF – Rachel's sterility is a consequence of the very company she now controls. Enraged by this discovery, Dyad takes Sarah hostage two episodes later, beginning a scrupulous medical examination before Rachel tells her to 'enjoy her oophorectomy' (By Means Which Have Never Yet Been Tried). Discontent with her own sterility as both a function of her biological design and her inability to solidify kinship with her *sestras*, Rachel attempts to inflict the same biological fate onto Sarah. Through her adoptive family, the *sestrahood*, and her relationship with her biological daughter Kira, Sarah emboldens Rachel's maternal failings not only through her infertility but also through her inability to form and make the very kind of kinship formations that she was deprived of following her adoptive parents' presumed death.

As Zisman argues that Rachel's sterility 'leaves her so yearning and unfulfilled' she abandons any 'attempts to be kind or ethical', Rachel's sterility can also be allegorised as the absence of nurture, both as a child herself and through her ability to create a sense of kinship with her biological siblings (Zisman 2022). This is juxtaposed against Alison, who is also infertile, and Donnie's adopted children, both of whom are Black and thus visibly unrelated to their parents. While nuclear in its construction, Alison's multiracial, chosen family further disputes Zisman's argument that *Orphan Black* perpetuates patriarchal ideas about biological motherhood and suggests that women are 'only truly happy and humanized when they biologically reproduce' (Ibid.). Contrasting this, Rachel's obsession with motherhood as a means to effectively reproduce herself in *imago dei* and the Neolutionist ideology is clarified when she meets and becomes a mother figure to Charlotte, the youngest Leda clone. Like the Child, Charlotte initially typifies futurity for Rachel, offering her one of the few opportunities to mother a child to whom she is biologically related. Yet Rachel's emotional sterility and innate lack of maternal qualities are exemplified when Charlotte, initially an embodied product of somatic capitalism, becomes increasingly afflicted by the hereditary Leda illness and her physical disability. No

longer emblematic of futurity, Charlotte is rendered sacrificial as Rachel proves willing to let her die to gain additional data on the disease. For all her power, capital, and heteronormative privilege, Rachel is unable to find a family willing to choose her.

Difficulties for the Theory: The Future of Posthumanist Kinship
Although biology and gestation operate as the catalyst that brings the *sestrahood* together, the future potentialities of reproductive biotechnologies as kin-creating tools are almost entirely condemned within the framework of *Orphan Black*. Surrogacy is nearly always portrayed as exploitative and violent, eradicating most or all the surrogate's bodily agency. Helena is forcefully inseminated by the Proletheans, a cult of religious extremists who believe that synthetic biology is God's will. The surrogates of BrightBorn are subjects of an unbeknownst genetic experiment, often giving birth to malformed children in excruciating labour. And Helena and Sarah's birth mother Amelia is recruited by Dyad in exchange for financial security and citizenship but has the true nature of her pregnancy concealed from her.

As a Black woman, Amelia also highlights how *Orphan Black*'s narrative relegates its characters of colour to tragic personas, with no opportunity for salvation within the show's wider arc (Ibid.). For a television series preoccupied with the prevalence of eugenics in contemporary transhumanism, *Orphan Black*, in Rebecca Wilbanks' words, 'stops short' of adequately exploring the implications of racial politics in a world that all too closely resembles our own. Yet the series certainly recognises the connotations racial signifiers hold; Rachel's sleek, blonde bob starkly contrasts Cosima's dreadlocks, the latter of which certainly invites critical inquiry from the perspective of culturally appropriative styles. Further emboldening preconceptions of reproductive caste systems, the show omits the experiences of families and same-sex couples who may use ARTs. Kendra, a BrightBorn surrogate, follows Amelia as another Black surrogate who only functions to gestate and protect her (white) child with no exploration of the characters beyond this. Depictions of ethical and collaborative surrogacy arrangements that Gunnarson advocates for are entirely absent from *Orphan Black*, as is an explication of what role race plays in this world, which Jennifer L. Lieberman suggests 'threatens to flatten some of the important feminist work that *Orphan Black* has been celebrated for doing' (Lieberman 2018, 401).

Alongside the reproachfulness of *Orphan Black*'s attitude toward using ARTs to create new kin is the series' early fixation on the family as established through biological models. While *Orphan Black*'s cult following #CloneClub can be largely attributed to the series' poignant exploration of LGBTQ+ relationships, many of its familial relationships are underdeveloped, often failing to address why some characters are shown to have inexplicable bonds with one another. Sarah notes that she has been 'dreaming' about meeting Amelia her 'whole life', even though Mrs S. points out that 'she didn't raise' Sarah (Endless Forms Most Beautiful, 2013). The narrative never clarifies Sarah's investment in locating her birth mother, especially given that Amelia bears no blood relation to Sarah. This unexplained connection also extends to the series' depiction of Helena's relationship with Sarah and Kira. Helena's 'sisterly connection [is] so pronounced that she can feel it physically'; in doing so, *Orphan Black* partially 'underwrites the queer and feminist forms of kinship' the series ultimately champions (Lieberman 2018, 403). Kira similarly seems to share this special bond with Helena, able to transform her from animalistic and murderous one moment to caring and maternal the next. While the nature of

Helena's bond with Kira is never materially solved, *Orphan Black* repeatedly affirms that the child can feel whatever the other *sestras* can: 'Mommy, your sisters, I know how they feel sometimes . . . Like Cosima, when she's sad. Helena, when she's lonely. Rachel's the angriest. There's even some I don't know . . . I feel you, too, mommy' (Human Raw Material).

After leaving its viewership with these questions unanswered, *Orphan Black* returns to screens in 2023 in a spin-off titled *Echoes*. In the years since *Orphan Black*'s original airing, the landscape of reproductive healthcare across the globe has radically changed. While the surrogacy industry has since undergone a drastic transformation with increased regulations and restrictions over dubiously ethical surrogacy tourism hubs, nationwide protests ensued following increasingly restrictive abortion access in North America. With an ever-expanding number of television and film franchises retroactively challenging and developing narratives, responding to critical and fan feedback alike, *Orphan Black: Echoes* may very well address the concerns that its predecessor left behind. While interrogating kinship under posthumanism holds few clear answers, *Orphan Black*'s strength lies in its deconstruction of the (nuclear) family itself, advocating for networks built on solidarity and consent instead. For *Echoes* to sustain the political efficacy of *Orphan Black*, it must also explore the social possibilities of ARTs and the power they hold to create utopian modes of kinning.

Conclusion

Although early scholarship on the family by choice predominantly focused on their structural and social dissonance from the biological family, *Orphan Black* radically challenges these preconceptions to explore new modalities of kinship beyond the scope of the nuclear family. Consciously drawing upon the posthumanist sensibility of Haraway's works, the show exemplifies the liberatory possibility of ARTs and their potential to create new kinship networks while also reflecting upon their intrinsic connection with chosen families. In particular, *Orphan Black*'s definitive highlighting of queer characters – concerning both gender and sexuality – captures the milieu of kin-making in our epoch of biotechnological contemporaneity. In Haraway's terms, the *sestrahood* functions as a posthumanist 'self-consciously constructed space', acting 'on the basis of conscious coalition, of affinity, of political kinship' (Haraway 2016a, 18), rejecting Edelman's suggestion of queerness's inherent antisociality. More fittingly, the *sestras* embody Muñoz's vision of queer utopianism, constructing their own futurity through their social networks of kin and chosen family.

Encompassing reproductive justice discourses on abortion, cloning, (neo)citizenship, surrogacy, forced insemination, and much more, *Orphan Black*'s dystopian mythos offers vital consideration of the place that developing technologies hold in our world. Made only more urgent by the series' offering of an unequivocally queerfeminist venture into SF, *Orphan Black* presents family, kinship, and solidarity as defiance against patriarchal capitalism and eugenics. While the series' relationship with using ARTs themselves is often intransigent under its framework of biocapitalist and scrupulous surveillance of the female body, its explicit critique of eugenics through Neolutionism crucially challenged the growing prevalence of Trumpian ideologies in North America at the time. Yet, instead of presenting its viewership with definitive solutions for fully regulating ARTs, *Orphan Black* is more fittingly viewed as a cautionary tale of their potential exploitation. Only then can we consider how queerness and posthumanism may co-exist alongside one another and alternative ways to create future kin beyond the scope of biology.

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