

**A Curious Doubled Existence: Birth Here and in Lois McMaster Bujold's Vorkosigan Saga**

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## A Curious Doubled Existence: Birth Here & in Lois McMaster Bujold's Vorkosigan Saga

*ABSTRACT: Contemporary discussions around the medicalization of birth and reproduction are sites of enormous tension and dissent for women, feminist or not. In this essay I will focus on how the SF works of Lois McMaster Bujold examine and elaborate on those tensions. I will draw on her SF texts, focusing on the depictions of birth and reproduction experienced by selected characters as well as contemporary discussions around birth. Bujold's work presents a framework for addressing the issues surrounding birth choices and reproductive technologies that integrates the socio-emotional with the technological—sites of enormous conflict in her universe—while remaining cognizant of contemporary Western ideals.*

Lois McMaster Bujold's science fiction (SF) relies on the symbiotic relationship between the technological and the social. This is often illustrated by the tension between the scientific and medicalized process of reproduction (via uterine replicators, cloning, and genetic modification) and the primal, 'natural' process. Varied levels of technological advancement and associated societal changes across the myriad planets within her SF universe allow Bujold to structure this tension as an emotional and social process as much as a medical or obstetrical one, while maintaining a respect for the choices, risks, and vulnerabilities involved in becoming pregnant. Contrasting the experiences of three births depicted within the series—Cordelia Naismith and her son Miles Vorkosigan; Alys Vorpatril and her son Ivan; Ekaterin Vorsoisson and the simultaneously replicator-gestated 'twins' Helen and Aral Vorkosigan—allows us to situate Bujold's explorations within our contemporary discussions around birth choices, technology and medical interventions developed over the past 30 years. Her depiction of medical intervention and the experience of pregnancy offers a philosophy to integrate the technological and the natural, manifesting a socio-cultural experience that does more than simply extrapolate from existing technological advances.

Bujold's SF work highlights and integrates women's experiences into the narrative. It is this examination and ultimately hopeful yet practical approach that makes Bujold's work feminist – it is "Invention...stories and role models and possibilities, that prepare us to leap barriers and scale heights no one has reached before, that prepare us to change the world." (Gomoll 6). The three births depicted are quite different in the context, the aftermath, and the socio-emotional performance of the method by which the births take place, but they share a common theme: trust and fear of the biological and social process of birth. The fears and emotional contexts expressed by the women echo those shared by contemporary women in discussions around birth, and the increasing prominence of women's voices, experiences and histories within culture. Bujold's depiction of the planetary society of Beta and their reproductive control mechanisms has been read as a feminist utopia of sorts within the text and by readers [1] but the author calls it "psychological allegory, actually a sly sort of fantasy with technology," disavowing any intended utopia, feminist or otherwise, both in and out of the text. Sylvia Kelso challenges this with the observation that "feminist discourse and feminist stances turn up, apparently naturalized" in post-80s SF, including Bujold's work (Kelso and Bujold 404). The existence of the births in the text reveals some of those feminist ideals around women's stories. The practicality of Bujold's depictions is what allows them to resonate so clearly with contemporary concerns, even as they have left her work open to pigeon-holing as space opera, or otherwise not taken seriously as 'hard' science fiction (Wisse np). However, Lee posits that

Bujold uses the replicator to explore the implications of technologically mediated reproduction within varied set of social arrangements, linked through their reliance on the replicator for reproductive control... the narratives render this central point cryptic, a footnote within the more overtly military or detective-fiction action. (Lee, "(N)ovum" np).

Thus the position of reproduction within the society itself, and our own, contributes to the invisibility of the uterine replicator as 'hard' tech. Bujold's identification of her work as "fantasy with

technology” (Kelso and Bujold 404) with the naturalized feminism and foregrounding of women’s stories and experiences, points to those primal emotions of fear and trust in the process of birth that exist regardless of genre, dependent entirely on the authorial integration of reproduction into the narrative.

The main considerations shared by the three women are about birth and technology, death or separation, and the aftermath of birth. There are obvious overlaps—for all the characters birth and death are inextricably interwoven, as are technology and the aftermath—but the threefold theme of birth, death, and life creates a matrix to explore Bujold’s writing and contemporary concerns. For most of human history, birth has posed the greatest physical, emotional, social and financial risk undertaken by women and women alone; even with current technologies around gender and reproduction, it is still a risk undertaken by anyone capable of becoming pregnant (which remains primarily women-as-a-class, even with our progress around gender issues). Bujold depicts this as the defining difference between the genders; women and hermaphrodites [2] possess the possibility of pregnancy, forced or otherwise, and this in and of itself embodies their experiences in the world in a way not shared with those who are incapable (which is only men—those who can engender the pregnancy but not endure it[3]). Even within the pseudo-utopian permissiveness of Beta, where upon menarche young girls receive a contraceptive implant, a hymenectomy and are welcome to visit Licensed Practical Sexual Therapists, women and hermaphrodites are still vulnerable to unwanted or forced pregnancies. Primarily these are engendered as part of the Barryaran war campaign, but Cordelia refers to unlicensed children, and mentions that rape still occurs on Beta—she does not elaborate beyond those points, but simply acknowledges those un-licensed pregnancies as “... so rare, they’re dealt with on a case-by-case basis.” (*Cordelia’s Honor* ch 17). The technology that allows the characters to have fully functioning and side-effect-free contraception is no protection against a forced pregnancy, just as the uterine replicator allowing a fetus to exist outside its mother is not protection against the outside world. Both somewhat utopian concepts are revealed as only artificially restructuring the experience of women and hermaphrodites to the minimum level of male involvement in reproduction, thus maintaining a reflection of our contemporary gendering of reproduction with the added benefits of Bujold’s technological future.

It is from this unequal risk that her characters, along with women worldwide, embark upon constructing families, in a variety of ways both familiar and unfamiliar. Alys Vorpatril’s natural conception, pregnancy and birth are a familiar narrative and a ‘control’ to reveal the existence of ‘natural’ birth within Bujold’s future vision, with Cordelia Vorkosigan’s natural conception, interrupted pregnancy, caesarean section and uterine replicator-housed infant slightly less so—even as her experiences will resonate clearly with anyone who has given birth to a premature infant, or undergone a difficult pregnancy. Ekaterin’s textual experience of an entirely *in vitro* conception and birth is the least familiar, as she eventually risks missing the birth of her own children. However, the three characters echo a number of contemporary concerns around birth, natural and medically assisted—the technologies, the dangers, the separations and what comes afterwards, regardless of how one identifies with the method of birthing. It is this marriage of technology and the very physical, very emotional context of birth-giving that subverts what Sarah Lefanu calls a “...dualistic notion of character versus technology” within SF (“Sex, Sub-atomic particles and Sociology” 181). Bujold’s integration of technology into embodied experience shows her own distance from the conventions of the genre, illustrating instead her focus on the social. Ekaterin’s experience, as alien as the concept may be, still does not pit her against the technology; instead it allows her children to exist even as the possibility arises that she and her husband will not survive.

#### BIRTH, DEATH & TECHNOLOGY

The concept of the uterine replicator is not new. They have an established history in the literature ranging from Ann Oakley’s warnings on the obstetrical power imbalance and obsolescence of

women in *The Captured Womb: A history of the medical care of pregnant women* (1984), and the genetically and mechanically modified decanters from *Brave New World* (1932) to Shulamith Firestone's visions of a feminist utopia only possible with artificial reproduction in her *The Dialectic of Sex* (1970), and the carefully maintained and nurtured 'tubing' of David Weber's *Honorverse* (1992-ongoing). The uterine replicator can fill many societal functions, and recall varying levels of body horror, misogyny, or positive medicalization; Bujold's SF portrays the uterine replicator almost entirely favorably in terms of the outcomes and the adoption of the process, with the spectre of 'death in childbirth' both very real and very present, for mother or child. She addresses not only the socio-emotional cost of pregnancy, but also the physical and the economic cost to society. This is a theme throughout her work and addresses the ways in which communities seek to ensure each child born is wanted, cared for and integrated into society. However, she does not present the uterine replicator as a technological utopia free of harm, risk or failure, as illustrated by the birth-givings of Cordelia, Alys and Ekaterin. This uptake of the technological process of birth, be it the uterine replicator in Bujold's universe or caesarean births and epidurals in contemporary society, creates sites of tension where the historical narratives—from the idea of birth pains as punishment to unmedicated birth as an indicator of personal power—are at war with the expressed desires of many women, and are also subject to the manipulation of male-dominated medical structures seeking to dictate access to the technology, or to semantically separate the woman from the fetus as demonstrated in Hartouni's *Cultural Conceptions* (1997). Even though Bujold depicts the dangers of the uterine replicator, she does not offer a one-sided or incomplete vision of what the technology offers to women and to society.

Cordelia Naismith is the protagonist of two of Bujold's SF works – *Shards of Honor* (1986) and *Barrayar* (1991) (collected together as *Cordelia's Honor* in 1996, which is the omnibus referenced in this essay); in these novels she is variously an astrocartographer, (space)ship Captain, prisoner of war, smuggler of arms, war hero turned traitor, vice-Regent, mother and foster-mother to the child Emperor of Barrayar. Her journey from her home world of Beta (highly technologically advanced with legendary social and sexual freedom, economically stable, democratic and affluent) to Barrayar, the home world of her eventual husband (settled then isolated for 600 years, misogynistic, warlike, technologically bereft, poverty-stricken, with extreme class-based differences but on an upward trajectory economically and becoming more progressive/'galactic' socially) is punctuated by war, secrecy and her own fractured sense of home. She goes on to be a recurring character in the rest of the series as the mother of the protagonist—and retired Vice-Regent, and Vicereine of a newly settled planet that she herself had discovered, and progenitor of a variety of scholarships and schemes for increasing Barrayar's social and technological wealth.

When Cordelia falls pregnant she seeks to be 'good'—by Barrayaran standards, which means a 'body birth.' On her home world she would not have considered a body birth or even a 'natural' conception due to the risks of her chosen career but without the technologies of home, and seeking the social approval of a watching planet, she chooses to follow the path of least resistance. [4] After her fears around body births are realized when an attempt at assassinating her husband poisons her and the treatment damages her five-month-old fetus, she begins to rebel.

The primitive Barrayaran back-to-the-apes style gestation was nothing but the utter failure of reason to triumph over emotion. She'd so wanted to please, to fit in, to try to become Barrayaran. . . And so my child pays the price. Never again. (*Cordelia's Honor* ch 9)

At first she is pushed towards abortion as Barrayar has a deep-seated societal loathing of disability, evidenced by infanticide for the obviously disabled at birth, euthanasia for the wounded and social isolation for those who do not choose suicide, but in order to provide the best possible chance for the fetus' survival and health she chooses to continue the pregnancy in the uterine replicator as the medical treatments would otherwise kill or cripple her. To achieve this, her pregnancy is interrupted by a caesarean that ultimately almost kills her:

Vaagen plunged his gloved hands into her belly as dark whorls clouded Cordelia's vision, her head aching, exploding in sudden sparkling flashes. The blackness ballooned out, overwhelming her. The last thing she heard was the surgeon's despairing sibilant voice, 'Oh, shit...!' (*Cordelia's Honor* ch 9)

Her recovery from this takes place as part of the narrative (as opposed to some recent surgical births in science fiction, such as Shaw's self-administered C-section in *Prometheus*) and explicitly notes the violence of the act, even within the medical context—"The vibra-scalpel had made a cleaner cut through her abdomen than, say, your average sabre-thrust, but it was no less deep." (*Cordelia's Honor* ch 9). There is no escaping, even within the technological framework, the embodied experience of pregnancy and birth and the recovery from the same. Her son Miles is saved and treatment begins in order to address the effects of the poison. It is at this point that Cordelia reflects on how her choices are what ultimately affect both her and her child. Her desire to conform, both as a newcomer and as a high-status woman, was at odds with her initial ideals and it is this conflict that arouses her anger, particularly the pressure to abort the definitely 'damaged' and disabled fetus and continue performing as her new home society expects. She maintains some support for her actions in continuing the pregnancy via the replicator from her husband and others, but suffers significant amounts of confrontation and attempts at manipulation, including an attempt to 'abort' the uterine-replicator-housed infant. This societal pressure to maintain a eugenically motivated 'purity' reflects, unkindly, our own statistics and rhetoric around abortion of fetuses bearing markers for disabilities, the selective non-treatment of disabled infants (Saxton), and the experiences of mothers in those scenarios. The technology that saves lives within the context of reproduction is delivered on the basis of perceived worth and it is only Cordelia's will, choice, and status that allows Miles to access and benefit from the uterine replicator and the treatment it enables. This narrative structure, of the pressures placed upon the pregnant woman by both society and the medical establishment with treatment a punishment or reward, is a common trope within birth stories; the social has an inextricable effect on the medical, particularly within something as emotionally fraught as birth.

At the other end of the technological spectrum is Alys Vorpatril's birthing of Ivan. Alys is an aristocratic Barryaran woman, whose husband Padma is related to Cordelia's husband Aral. Through the series she remains a representative of the women of the High Vor and devoted to the 'feminine' arts; as the series progresses she becomes the Social Secretary for the Emperor and is revealed as a conduit for domestic information and espionage. However, she gives birth to Ivan at the beginning of the series—a few weeks after Cordelia's placental transfer and in the midst of a civil war. Her planned birth is sent awry by the war—she has no sterilized hospital or friendly doctor. Instead, during labor, she is in hiding from soldiers and eventually captured by the same. Her waters break as she is captured and threatened by the enemy forces. She is found because her husband, Padma, is intent on finding a doctor or midwife against her wishes. He is murdered in front of her, but she is rescued by Cordelia (and her motley group of guerrilla fighters). Less than an hour after Alys is rescued she gives birth on the floor, with Cordelia's armsman, Bothari, as midwife.

And so the tableau hung, for spasm after uterine spasm. Alys looked utterly wrung, crying very quietly, unable to stop her body's repeated attempts to turn itself inside out long enough to catch either breath or balance. The baby's head crowned, dark haired, but seemed unable to go further. (*Cordelia's Honor* ch 16)

Instead of Padma's promised doctors she is attended by a group of four people, of whom only the deeply psychologically unstable armsman has any experience with birth. This scene encapsulates many of the concerns and fears around contemporary homebirth, from the un-hospital-like surroundings, to the lack of an appropriately trained attendant, to the danger of a baby who is "...unable to go further." (*Cordelia's Honor* ch 16). Bothari employs what we can identify as probably a McRoberts Maneuver to assist the birth: he "...crouched, frowned judiciously, hunkered around to her side, placed a big hand on her belly, and waited for the next spasm. Then he leaned." (*Cordelia's Honor* ch 16) This is a far cry from safe, gentle or painless, or the disembodied promises of a

technologically assisted birth. Within the text, Bujold does not ignore Alys' "brave and bloody birth-giving," (*Cordelia's Honor* ch 19) but instead positions its very success as what allows it to be ignored by the surrounding society. It is a depiction of shoulder dystocia, one of the most common yet most dangerous complications to befall an otherwise straightforward labor and birth, and one that, as a cause of hypoxic brain damage to the infant is most often implicated as a major risk for non-medicalised births in contemporary culture and features heavily in discussion of the risks of homebirth (Australian Medical Association 17). It is also a depiction of a very low-tech method for resolving said complication, with the positive end result being socially invisible.

Yet for all the textual misgivings about natural 'back-to-the-apes' birth, it is Alys' son who is 'whole' while Cordelia's pays the price for her coerced decisions. The fear of mutation or disability on Barrayar is flavored strongly with misogyny; 'protecting the genome' via infanticide or abortion is women's work and Cordelia's refusal to adhere to the social contract is a rejection of both the teratophobic and the misogynist culture that results in the (thriving) survival of her son and her husband. Alys' acquiescence is not rewarded, though, and Padma dies for his lack of faith in her ability to birth unattended. Later in the series, when musing about births, it is Alys who is most emotionally compromised. While speaking with her son and his new wife, she elaborates on her feelings about the birth 35 years after the event.

When I went into labor, Padma panicked. I begged him not to go out, but he was frantic to find someone, anyone, to take over the terrifying task of delivering a baby that women all over the planet had been doing every damned day since the Firsters landed ... So he went out, leaving me alone and petrified for hours with my contractions getting worse, waiting, ... I knew, then and forever after, that it wasn't his bravery that killed him—it was his cowardice. (*Captain Vorpatril's Alliance* ch 11)

This too echoes much of the contemporary concern about homebirth and natural birth debate being "less about the evidence for or against its safety, and more about underlying issues such as the meaning of safety itself and the struggle between paternalism and maternal autonomy" (Freeze p292). Padma's response to Alys' birthing is not about her, but about his desire to simultaneously act and to distance himself, to control the act. It is not the birth itself that traumatizes Alys or Cordelia, but the reactions of those (men) around them and the actions they take against their will, or in Cordelia's case, the actions she chose in an attempt to conform to their desires. Cordelia's victory of her logic over Barrayaran irrationality is made apparent in the survival and ultimate triumph of her son while Alys' victory is far more pyrrhic, with Padma's death taking the narrative place of her own. Cordelia's rationality is based not purely in the technological science, but in a "...ruthless theism..." whereby "...tests are a gift..." (*Cordelia's Honor* ch 15) and situated entirely within her psycho-social understanding of humanity. It is this conflict between the life-saving technologies of obstetric intervention (uterine replicators, caesarean sections, epidurals, medications) and the common ability for women to undergo pregnancy and birth without those technologies that underpins much tension in contemporary discussions of birth—and the depictions within Bujold's work.

Ekaterin's birth-giving contrasts with the violence of Cordelia and Alys' experiences; her children are conceived *in vitro* and gestated *in vitro*, gene-screened to ensure neither of them are subject to genetic disease. She and her husband (Miles Vorkosigan, series protagonist in his own right and Cordelia's aforementioned disabled son) perform diplomatic duties during the gestation and she ably assists in averting outright war while coming within days of missing the births of her children. Due to the uterine replicator, the births can be pushed out to the limits of the technology, allowing her enough time to return and attend their births. The uncertainty of birth-giving is her professional schedule, not the vagaries of the body. The event itself is a disconcertingly calm contrast to the previously mentioned body-births (Alys' vaginal birth and Cordelia's initial caesarean).

They advanced to the table. Ekaterin went around, and the techs scrambled out of her way; Miles hooked his cane over the edge, supported himself with one hand, and raised the other

to match Ekaterin's. A double snap sounded from the latches. They moved down and repeated the gesture with the second replicator.

'Good,' Ekaterin whispered.

Then they had to stand out of the way, watching with irrational anxiety as the obstetrician popped the first lid, swept the exchange tube matting aside, slit the caul, and lifted the pink squirming infant out into the light. A few heart-stopping moments clearing air passages, draining and cutting the cord... (*Diplomatic Immunity* epilogue)

The embodiment of this experience is shared amongst the family, with none of the fear or pain of either Alys' or Cordelia's experiences (or at least, Cordelia's initial experience). Unlike Cordelia, Ekaterin evinces no emotional preference for the technological method, simply a practical acknowledgement of the putative safety; a limited safety as, when war looms, everyone is vulnerable, regardless of gestational habitat—which is something that she is explicitly aware of as the partner of Miles and privy to his own damage from birth and to Cordelia's experiences. This birth-giving of Ekaterin's twins shares much with Miles' second birth from the replicator, illustrating further that it is the emotional context of birth that provided much of Cordelia's conflict. Even though Miles was small, weak and obviously disabled, the second birthing was much more emotionally harmonious with her beliefs; even though it was in direct and open conflict with her father-in-law and much of society. At that point her internal equilibrium is maintained by that adherence to her own ideals instead of the socio-emotional pressures to perform birth acceptably regardless of the consequences. The social context of the birth is what gave it the power. It was not simply the closeness to death, but the knowledge that by attempting to body-birth against her own principles, she had compromised and paid the price. The second birth of Miles is part of that price, but it is also a triumph of Cordelia's principles, and for all the traumas of the journey, the birth itself is a matter of "If you can open a picnic cooler, you can do this." (*Cordelia's Honor* ch 20)

Bujold's writing rejects the tendency for science fiction to have "a certain contempt for the associations of the flesh." (Griffith 258) This embodiment, the blood and pain and tears and joys of both the technologically assisted birth and the natural within her writing, allows for the depth of the *experiences* to be illustrated rather than simply the technological advances. These depictions of birth and the emotive socio-political context surrounding them, both as they are written and as the series treats them, align with contemporary arguments around birth and reproductive technologies as vocally illustrated within various, and varied, online contexts. The fear of death, both child and mother, is expressed in nearly any discussion about birth and is covered in layers of judgment from anti-homebirth to anti-caesarean. We have no risk-free uterine replicator to avert the dangers of pregnancy or birth. Instead we have the acknowledged dangers of caesareans – infection, bleeding, increased complications for subsequent pregnancies, inadvertent harm to the infant either mechanically during the operation or also by creating a pre-term birth and the issues arising from that (Main, et al.) or In Vitro Fertilization and surrogacy. IVF itself has higher risks for the woman during both the process and the pregnancy (Mayo Clinic), as does surrogacy, particularly egg-donation or embryonic transfers where the fetus bears no genetic similarity to the mother, as this increases her chances of life-threatening and pregnancy-threatening complications such as eclampsia and premature birth (M.L.P. van der Hoorn). We also have the incubator, the techno-medical precursor to the uterine replicator, the development of which has reached a slow plateau at an absolute viability limit of around 22 weeks (with serious disability almost certain at this point). This, combined with IVF, is about as close as contemporary reproduction gets to the uterine replicator. Both offer far greater risks to mother and child than a 'natural' reproduction (albeit one that may or may not be technologically assisted by other means).

Bujold's future reproductive technology still includes risks, and those are reminiscent of the contemporary and historical risks faced by women. In the contemporary moment and recent past, women's bodies are still subject to "the use and abuse of so-called 'advances' in the fields of

technology..." (Armitt 6)—the spectre of thalidomide and other untested substances being provided to mothers and creating long term effects and disabilities, forced sterilizations and symphysiotomies, hover over any obstetrical intervention, not to mention the countless stories of arrogance, abuse or mistreatment within the contemporary hospital system to be found in nearly any discussion of birth [5]. This is still the case in Bujold's work; the permanently disabled mother-survivors of the treatments that Miles undergoes are mentioned only obliquely when discussing exactly how to treat the fetus without damaging the mother, providing an example of the mother-fetus semantic divide noted by Hartouni (1997) made flesh. Cordelia's own decision not to abort finds a mirror for Saxton's contention that "...some medical professionals and public health officials are promoting prenatal diagnosis and abortion with the intention of eliminating categories of disabled people..." ("Disability Rights and Selective Abortion" 377). Cordelia's position is an intensely personal one but she does not shy away from the effects on both her family, as the decision not to provide Miles with siblings that he can be compared to or disinherited in favor of, and the world around her as a very visible example of what she wishes to inspire, and how difficult that is for Miles.

The 'galactically enlightened' aversion to 'body births' often stated by Bujold's characters is undercut by the textual experiences of the characters and the ways in which those experiences of technology and birth interact with the societies depicted. In contemporary terms this aversion would focus on unmedicated/natural birth, on the increasing medicalization and resultant backlash against the same. It is the modern equivalent of using Firestone's "pregnancy is barbaric" (*The Dialectic of Sex* 190) to excuse and invite the 'humanizing' and elevating process of technological intervention without controlling for or acknowledging the complicity of a deeply patriarchal medical industry. Yet for each study proving the myriad problems laid at the feet of caesareans, the amount of surgical births is increasing in response both to maternal desires and to the aforementioned medical 'abuse and use' of technological intervention. Uterine replicators are a natural imaginative outcropping of contemporary technologized birth and one that, as with the aching of Cordelia's abdominal scar and her fears for a child being treated in a techno-nursery miles away, will resonate with many women's experiences. Conversely, Alys' experience almost directly speaks to the faith in one's body to birth that is a cornerstone of many 'natural' birthing traditions, and it will also resonate with many women. Birth is a multifaceted and intricate site of conflict within women's bodies, society and technology, and the complexity of Bujold's depictions are an extension of the choices of contemporary mothers. The conflict she examines is not new and the tensions she illustrates were in evidence during the 1970s and 80s as much as they are now, illustrated by Firestone's arguments against the natural birth movement, and Dahlen's arguments for the same, nearly forty years apart (*The Dialectic of Sex* 1970, "For some women, unassisted home births are worth the risks." 2012). Instead of this back and forth, Bujold offers a meta-textual affirmation of trust in *women as a class*, not just their bodies. She does not simply offer the uterine replicator as the only choice, or even the best choice, but simply what is chosen by many women. The textual preference for the replicators is undermined by the juxtaposition of Alys' birth-giving and Cordelia's initial caesarian, although the replicator births of Miles and thirty-something years later his own twins is almost as complication-free as that of Alys' son Ivan and without maternal trauma.

Pro-uterine replicator ideologies in Bujold's work are often expressed not as a judgment of the woman or her choice but as a sense of horror that she would be 'forced' into that experience—unlike the rarer instances where characters express discontent about *in vitro* births, which are invariably accompanied by the misogyny-tinged complaints of 'taking the easy way out' and 'ducking one's duty' familiar to any discussion around contemporary IVF, caesarian or epidurals. Yet, even on Beta, with its highly advanced technologies, body births are still chosen, are still an option for those possessing the necessary equipment; on Beta this constitutes everybody due to technology allowing men to transition and gestate using their own genetically modified and 'grown' female sex organs. Occasionally the aversion is tainted with disgust, primarily from inhabitants of the worlds in which



not only are uterine replicators standard, but reproduction is entirely technologically mandated and genetic modification is widespread. The only world with that apparent mandate on uterine replicator use (Cetaganda) is also the long-term antagonist of the series, and a culture that engages in the extremes of genetic modification to the point that children are unlikely to be genetically related to their parents. Similarly, Jackson's Whole seems to have something akin to a mandate, and it too is an antagonist world, as well as one with a heavy bias to extreme genetic modification. The uterine replicator is a manifestation of eugenics rather than feminism on these worlds and the disgust a result of implied distance from the female and physical embodiment of birth.

The risk of death remains a facet of pregnancy and birth, regardless of technological advancement. As such, birth and death are inextricably bound within the stories we tell; from folklore to Disney, the mother dies. Bujold subverts the expected narrative of maternal death and she accomplishes this without the comforting magic of technological miracles. Her work posits an incredible amount of technological advancement within birth, genetic modification and reproductive health, but it does not wipe the slate clean, it does not remove the death/birth binary, it does not cleanly remove the mother. As the series progresses Cordelia and Alys' birth-givings are perpetually referenced, for good or ill, and their emotional power as parent or care-giver is explicitly referenced.

It's . . . a transcendental act. Making life. I thought about that, when I was carrying Miles. 'By this act, I bring one death into the world.' One birth, one death, and all the pain and acts of will between. I didn't understand certain Oriental mystic symbols like the Death-mother, Kali, till I realized it wasn't mystic at all, just plain fact. A Barrayaran-style sexual 'accident' can start a chain of causality that doesn't stop till the end of time. Our children change us . . . whether they live or not. (*Cordelia's Honor* ch 17)

Bujold allows her characters to grow, as child and parent, with the transmission of knowledge that entails (for good or ill). Mothers and care-givers are active within the narrative, as mothers and as free agents, and relationships are formed around that maternal identity. Even on Athos, the all-male colony, paternal caring is explicitly wound through the narrative, as is the still-necessary female presence in the ovarian tissues they require to continue reproducing.

It is this juxtaposition of birth and death (or at least the risk thereof) in which the meanings of the uterine replicator become clear. It is used, superficially, within Bujold's work as a method by which anyone can reproduce, no matter the presence of a womb (although an egg is still required for reproduction – cloning is available to all, requiring only a smear of genetic material but is subject to a number of different legal/ethical identifications within universe that place it adjacent to but not precisely reproduction depending on social context) but it is still a tool of the society within which it exists. On Barrayar the uterine replicator offers unacceptable social and medical freedoms to women and would not be permitted except the eugenic potential is of high enough value to circumvent the opposition to social change. On Beta, home of the technologically free with contraceptive implants and uterine replicators for all, reproduction itself is tightly controlled and licensed, a dystopically flavoured utopia where each child is wanted and cared for in a safely middle-class existence at high cost to social freedoms. The call for licensing parents is a common one, but such calls often either condone or ignore the hierarchical privilege, the benevolent eugenics, inherent in the act – on Beta, only the licensed may reproduce, with financial restrictions placed on that licensing. Cordelia herself points out “Sexual behavior seems open at the price of absolute social control on its reproductive consequences. Has it never crossed your mind to wonder how that is enforced? It should.” (*A Civil Campaign*, ch 16). This juxtaposition of freedoms recalls Sarah LeFanu's identification of sexual freedom/autonomy as key to the feminist dystopic/utopic future (*In the chinks of the world machine: Feminism and Science Fiction*) but addresses the embodied experiences of contemporary life that dictate our relationship with sex and reproduction and the as yet inextricable link between the two. When women, and only women, carry the risks and possibilities of

gestation, it remains a gendered experience that is affected by the same societal expectations and demands of *any* gendered experience. [6]

#### THE AFTERMATH

In Bujold's writing, as in contemporary society, the effects from birth are not transitory. Mothers can, and do, evince PTSD-type symptoms from the birth-giving of their children. (Alcorn) Alys talks about her yearly pilgrimage to Padma's death site, and the smell of burning hair; Miles acknowledges that his birth, his disabilities, are what prevented his parents from having more children. This, in and of itself, is a tension for Cordelia—she evinces a desire for many more children while still bodily pregnant with Miles. However, after his transfer, treatment and birth, she acknowledges that on Barrayar for her to have subsequent children would marginalize Miles even more and require technological advances such as cloning, genetic modification, uterine replicator specialists, that she believes are simply unavailable. She explains to Miles' clone, who she claims as a son, that "you are my second chance. My new hope, all unlooked-for. I never thought I could have another child. *On Barrayar.*" (*Mirror Dance* ch 18; my emphasis). Her own fears of what Barrayar would do to Miles, to any more of her children, forestalls her desire to have more children; contrary to much of our contemporary ideas of birth, it is not that which has traumatized her but the societal response to her child's disabilities. Alys, bound by the structures of the society, does not take another husband and without that legitimizing presence would have not more children. As Lee puts it: "She must remain of perfect breeding, in good taste, with impeccable manners, else risk losing all of her credibility in high Vor society, the locus and basis of her existing power" ("Legitimacy and Legibility: Rereading Civil Discourse Through Feminist Figurations in Cordelia's Honor" 35). Ekaterin, whose first birth was a 'body birth' and as a result her son's genetic disease required treatment as a teen instead of before conception, is able to feel secure in the knowledge that her future children will not be subject to hidden diseases as her first husband was, or her first son. While those 'hidden' diseases are in contrast to the very obvious disabilities of her second husband, Miles, his issues are not genetic, unable to be transmitted to their children. It is the fear of mutation, and the social ostracism because of it, that drove her first husband to outlaw genetic treatment for either himself or his son while allowing the 'galactic' technology of contraception to infiltrate his household. With Miles, the fear and treatment of genetic disorders is written plainly upon his body. The fear of mutation or illegitimacy is what drives the respective reproductive choices of Ekaterin and Alys. Again, the method of birth is not the site of the trauma, but the societal manifestations of bigotry and misogyny around the body and the performance of birthing.

The aftermath of bringing uterine replicators to a technologically 'backwards' world is at first small and contained: fetuses engendered by war crimes being sent home to their Barryaran fathers, gestated to maturity, then raised in orphanages. In and of itself that presents a moral quandary and a rejection of some contemporary statements about the 'rarity' and/or 'impossibility' of pregnancy by rape; if the child is returned to burden the rapist, not the mother, what does that imply about the emotional connection? After the last child is adopted out, the uterine replicator transforms from technological womb to site of medical breakthroughs for other treatments, and back to allow an entire society to change as women become increasingly aware of their options – a revolution of sorts (Lee, "Legitimacy and Legibility" 29) . An extreme gender imbalance develops on Barrayar, similar to that seen in some countries but caused by the indiscriminate uptake of sex-selective medication rather than sex-selective abortion and differential birth control use, and results in a scarcity of women within certain demographics (Cho 64). This scarcity combines with the prevalence of both maternal and fetal death in childbirth and a deep-seated societal fear of genetic mutation, and allows for uterine replicators to quickly become socially tolerated, in spite of the otherwise very overt misogyny around reproduction. It is no stretch to imagine that the replicators would take the place of NICU units—Miles' birth is very close to contemporary limits of viability and the replicator he is placed in fulfills many of the same functions. As with contemporary discussions of abortion and

micro-preemie care, his birth also creates tensions between women's reproductive rights and disability activism.

Abortion is still in existence in Bujold's future, even though fetuses can at any point be transferred to a uterine replicator. When discussing the transfer of the replicators and fetuses to Barrayar, Cordelia says "I'm surprised—maybe they just didn't want to argue about sending them home with any of the mothers. A couple of them were pretty emotionally divided about abortions. This puts the blood guilt on you." (*Cordelia's Honor* ch 11). Cordelia herself assumes that, should she have gotten pregnant during her captivity, the fetus would have joined those being 'returned to sender.' Bujold does not shy away from the results of this return; from there those children are adopted out, and in one case, Elena Bothari, goes on to become an important character in her own right—a character who, by virtue of the distance (emotional and literal) from her mother, has no knowledge of her conception other than what her father, the rapist, has told her. The supposed simplicity of adoption as a solution to rape-engendered pregnancy that is not abortion is played out in emotional detail and, by virtue of the uterine replicator, separated from the maternal experience until well after we are introduced to Elena. As readers, we know more than she does: we know about her conception, and we are prepared for her horror both at knowing the circumstances of her birth and at the realization that she is biologically created from a rapist and a murderer. Her character, like Miles', illustrates the positives of the uterine replicator but also the complicating factors of that technology that goes beyond the simple alternative-to-abortion argument. The oblique idea here is that these women could have chosen abortion, even though a technology exists that could nurture the fetus to maturation – it may seem like a startling concept except that even with contemporary technology there are concerns as "ever-lowering ages of viability broke the nexus between pregnancy termination and fetal death." (Cannold np). This illustrates again Bujold's continued affirmation of trust in women's choices.

There is no simple or easy answer to be found for reproductive choice, even with the uterine replicator. Bujold positions women as ultimately the arbiters of their reproductive choices, be it *in vivo*, *in vitro*, abortion, treatment or not to reproduce at all. A character notes that the very few men who insist upon body births are able to find women willing to put themselves through that process and that, while women are still unable to hold many positions of power within Barryaran society, they do wield the social power of scarcity to enforce their preferences. It is a power that is reliant on support from older generations—Alys' position as social organizer for the Emperor allows her to enforce this social edict from the top as well, and when the Empress chooses to use a uterine replicator it is seen simultaneously as a blow to the traditionalists and to the Barryaran way but also as a much needed step forward for the planet. Her power, limited by legislation, nonetheless manifests a deeper social change than can be explained only by her choice; it is her choice, and the social support of the Emperor, and Alys, that signals the move from the socially enforced rule of body births to a wider choice. Cordelia says, earlier in the series, that

The old men in government councils spend their lives arguing against or scheming to fund this or that bit of off-planet military hardware. Meanwhile, the uterine replicator is creeping in past their guard and they aren't even conscious that the debate that will fundamentally alter Barrayar's future is being carried on right now among their wives and daughters...Too late to keep it out, it's already here. (*Mirror Dance* ch 16)

Her observation is the mirror to Aral's earlier comment that "The new technoculture is producing plebe progressives as fast as our schools can crank them out" (*Cordelia's Honor* ch 14). It is not simply the theoretical and the technological that force societal change, but people living with those theories and technologies. Cordelia also acknowledges that the keepers of tradition are often women, again echoing those contemporary arguments around medical intervention in birth, where it is primarily women who are arguing for and against it.

These steps forward for Barrayar echo those for contemporary women with respect to birth control and medical treatments during pregnancy, with access varying across age, class, race and community. We can, mostly, imprecisely, and not without occasional serious consequences to our own health, control our fertility and no longer suffer loss after loss due to Rh sensitivities, or uncontrolled diabetes, pre-eclampsia or hyperemesis gravidarum, or any of the myriad ways in which pregnancy killed our female ancestors. It is similar with the advances in neonatal care and viability. These changes, while not as obvious as the uterine replicator in their effects, echo down the generations. Miles' missing siblings harken back to the tiny graves of our forebears' buried children, and highlight the relative scarcity now of fetal and infant death. Ekaterin's first husband's hidden genetic disease, and its presence in her son, recall the arguments about genetic testing in Western countries and resultant abortions, and the discussions about 'designer' children springing from that testing (Stangl). Even though it could easily be considered that "almost nothing else in medicine has saved lives on the scale that obstetrics has," birth, technologically assisted or otherwise, still suffers from a (very Barrayaran) notion of 'women's work' and commensurate lack of status (Gawande). As Oakley suggests, the medical culture of birth is still rife with misogyny and "harness(ing) paternal/patriarchal assumptions about women's personality and role to the service of its own ascent to professionalization." (Oakley 254). To apply Oakley to Barrayar is to note that the uptake of the uterine replicator happens not only to acquiesce to women's demands, but it is also to assuage a culture-wide fear of mutation and illegitimacy. Bujold's future includes the use of the uterine replicator to facilitate a male-only colony in *Ethan of Athos*, and significant levels of genetic modification from the creation of the four-armed Quaddies to the slave-creations of Jackson's Whole to the eugenicist desires of Cetaganda, even as it is also used by women to sustain their pregnancies by choice or necessity, or to return the fetal product of rape to its father. Technology can be used both by women and against women.

It is the symbiotic and detailed relationship between the emotional and the physical aspects of birth and technology depicted by Bujold that allows for a nuanced relationship to be developed. From that relationship, our contemporary discussions can also borrow her nuance and integrated understandings. One of the themes of her work is that "societies seek to solve the same fundamental problem—to assure that all children arriving will be cared for." (*A Civil Campaign* ch 16) With this focus, Bujold does not ignore the immediacy of the physical embodiment of childbirth but equally holds little sentiment for the 'pastoral' or even 'femaleness' (Gordon) marking her work as a covert kind of feminist SF. Bujold offers a practical vision of the future that fits within the social structures we ourselves see. Our own technologically assisted births are increasing but not without some opposition; Bujold integrates those concerns but does not restrict herself to a narratively or politically satisfying 'side.' Instead, like birth itself, she presents an incredibly complex weave of socio-emotional ideals, technological breakthroughs and the absolute uncertainty of the human experience. By exploring the range of uterine replicator usages, including the dystopian, the woman-erasing and the amoral, while not shying away from the positive, she illustrates contemporary concerns about medical/technological interventions during pregnancy and offers a better framework for discussion. The technology itself is not the issue; women's choices are not the issue; but the patriarchal and exploitative mechanisms using those things are the true concerns.

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#### NOTES

1. "Yes, I agree, going from relatively egalitarian Beta to bizarro feudal, patriarchal Barrayar is a definite downgrade." <http://www.tor.com/blogs/2009/04/one-birth-one-death-and-all-the-acts-of-pain-and-will-between-lois-mcmaster-bujolds-barrayar#21774> and "Being a woman, I'd of course

rather live on Beta Colony. Barrayar may be far more picturesque, but I would never choose to be a second-class citizen. . ." <http://calicoreaction.wordpress.com/2011/07/31/bujold-lois-mcmaster-cordelias-honor/#comment-10065> as reader reactions and Kareen's flippant "If that's Barrayar, I'll take Beta!" (*A Civil Campaign*, ch 16)

2. This is the term Bujold uses within text, and has been identified as problematic by a number of readers and reviewers. The first of the series was written in the late 70s and early 80s and much terminology is a legacy of that. In her universe the hermaphrodites were originally genetically engineered as a social experiment on the planet Beta. They prefer the term 'it' as a pronoun and possess male and female sex organs capable of sex and reproduction.

3. This includes trans\* people within her future who are able to transition and receive surgery that includes sex organs cloned from their own genetic material (possibly with that of family members where necessary, and genetically 'repaired' to remove any abnormalities). Even with the presence of flawless birth control the possibility, however probable, of pregnancy is shared only by those possessing a uterus – contraceptive devices offer no protection if they are removed. However, reproduction can be performed via cloning and uterine replicators without the introduction of eggs.

4. The author herself notes that even within the constraints of Barrayar, Cordelia was "...always autonomous, or at least knew she was there by her own choice." (Kelso and Bujold 409)

5. Symphysiotomy, the severing of the pubis symphysis cartilage to widen the pelvis during obstructed births, is rarely used intervention with significant morbidity for mothers that gained traction in Ireland between the 1960s and 1980s as doctors sought to avoid caesarean sections as the restrictions multiple sections placed upon women's future reproduction did not align with the prevailing religious code (Payne). Often performed without informed consent they are a manifestation of adverse reproductive coercion by medicine based on socio-religious teachings, and of an intervention that can provide enormous benefit when used with informed consent and for appropriate medical reasons (Verkuyl).

6. This is not to say that gestation/pregnancy is only experienced by women, or similarly that one must be capable of experiencing it to be a woman. Currently the experience of gestation and pregnancy is one only experienced by fertile people with a uterus and this is almost exclusively women as a class and as such is an experience loaded with gendered expectations and treatment. This has resulted in a sensationalizing of the 'spectacle' of the pregnant man (such as the media surrounding Thomas Beattie) while maintaining the gendered social expectations of pregnancy/birth including the medical treatment of pregnancy.

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