
April 2015

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Recommended Citation

Bodnar, MaryKate K. (2015) "Reproductive Genetics: Desired Genes, Gendered Ethics, and Eugenic Echoes," *The Hilltop Review*: Vol. 7 : Iss. 2 , Article 6.

Available at: <https://scholarworks.wmich.edu/hilltopreview/vol7/iss2/6>

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Cover Page Footnote

I would like to thank the Department of Anthropology at Western Michigan University. Special thanks to Dr. Jacqueline Eng for expanding my horizons into Biological Anthropology and Dr. Ann Miles for serving as my wonderful advisor.

Reproductive Genetics: Desired Genes, Gendered Ethics, and Eugenic Echoes

Co-Winner, Third Place Paper, Spring 2015

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Introduction

Science fiction works feature laboratories filled with made-to-order test tube babies, suggesting a technocratic and utopic reproductive future. World history evidences multiple movements through which the majority, the elite, and the powerful tirelessly attempted to eradicate undesirable traits by limiting reproductive options for peoples whom they believed contaminated the hereditary pool. Humans want the best outcomes for future generations; we value reproductive success, whatever we imagine that to mean in a particular historical moment. Eugenics encompasses “all prospective studies and purposes to improve, cure and create a race that would be exempt of various diseases and disabilities” (Güvercin & Arda, 2008, p. 20). As noble as creating a healthy human race may seem, efforts to do so continually bring side effects of discriminatory and violent policies for various groups of people that fall under the moments’ definitions of “unfit” or “dangerous” reproductive candidates. Mathematician Francis Galton formally introduced the concept of eugenics in 1883, defining it as “the study of the social control mechanisms that can better or worsen the mental and physical states of the upcoming future generations” (Güvercin & Arda, 2008, p. 21). Eugenic policies and sentiments have seen much iteration. Some “positive” policies sought to increase the presence of desired genes in the population, and some “negative” policies worked to contain and eradicate traits deemed undesirable. Eugenics has earned its negative reputation and gloomy connotations, but scholars now face old ethical eugenic questions with new, complex reproductive technologies.

Present knowledge of genetics and biomedical assisted reproduction make fertile ground for a new type of eugenics: reproductive genetics. Proponents of reproductive genetics aim to separate these techniques from the problematic and negative connotations associated with historical eugenic policies by claiming them as part of the liberal eugenic movement. This camp claims “that people should be able to choose genetic enhancements for their offspring, should these become safely available” (Fenton, 2006, p. 35). Not all scholars will agree with my nestling of reproductive genetics into the eugenic framework, but the eugenic echoes present in reproductive genetics discourse are too powerful to dismiss. In-vitro fertilization (IVF), the market for sperm and eggs, and prenatal genetic testing allow conscious decision-making regarding the potential genetic make-up of children. Decisions are made in a gendered and politicized environment, shaping our understandings of genes, eggs, and sperm around stereotypes and ideal social norms. In choosing “desirable” characteristics, whatever they may be, the characteristics avoided are classified as “undesirable.” It is not necessarily wrong or immoral to engage in this decision-making, but to avoid the eugenics of our past, we must acknowledge that reproductive genetics processes engage with ideas of gendered bodies, (im)morality, and medical authority. Elizabeth Ettore defines reproductive genetics as “utilization of DNA based technologies in the medical management and supervision of the reproductive process” (Ettorre, 2000, p. 403). Because the range of DNA based technologies is great, there are many genetic reproductive techniques available in the United States, but the

discussion here is limited to in-vitro fertilization (IVF), the market for sperm and eggs, and prenatal genetic testing.

IVF and Genetic Choice

The degree to which a reproductive genetic process is eugenic depends upon the opportunity for decision-making that it offers. IVF is often the first reproductive technology that comes to mind when considering assisted reproductive options. In-vitro fertilization means eggs are fertilized with sperm in a lab and then placed in the uterus. Some IVF procedures involve eggs and sperm from the couples who wish to be parents themselves; they don't shop around for eggs or sperm. But even this scenario is evaluative because IVF involves the fertilization of multiple eggs and the transfer of the one most likely to thrive to the uterus (Franklin, 1997, p. 200). It is easiest to understand IVF as eugenic when the egg and or sperm are selected for their potential success and desired genes; but even without this step, the fertilized egg is normatively evaluated, and some fertilized eggs will be discarded.

IVF does not necessarily carry with it the negative tropes of eugenics, but we too often classify it as unchallenged progressive medicine, offering expanded reproductive options. Sarah Franklin's "The embodiment of progress" discusses the social meanings and conceptualizations of IVF and resulting pregnancy. Franklin situates IVF as a response to failed conception and an avenue of new hope for couples struggling to conceive, which it absolutely is. Franklin simultaneously problematizes our notions of successful and failed conception. IVF gives couples renewed hope because they can try again if it fails, but the process can make feelings of failure more profound with each failed attempt (Franklin, 1997, p. 213). This technology has changed the very way we consider conception, something previously taken for granted as a "fact of life" that either happens or does not happen (Franklin, 1997, p. 199). We use the same term, "conception," whether the egg is fertilized in a lab dish or in-utero, via artificial insemination or during intercourse, but each type of conception carries its own connotations.

IVF is often discussed as "giving nature a helping hand." The process is both ordinary and extraordinary because it still involves an egg joining a sperm to make a baby, but with technological "help." These paradoxical attitudes are also attached to resulting children, "Much as the comments of would-be parents and the professionals that assist them in the context of IVF emphasize the normalness and naturalness of assisted conception, they also affirm that there is 'something special' about the children born from this technique" (Franklin, 1997, p. 200). Not only does IVF change the way children are conceived and add an evaluative step to that conception, but it also shapes the way resulting children are viewed by the parents and others. So even if we consider it all "conception resulting in a baby," we should be careful to understand that these words do not label homogeneous experiences.

Prenatal Testing and Gendered Experience

The variety of experience is sharply articulated between men's and women's encounters with reproductive genetics. Reproduction is necessarily gendered because it involves sperm from a male and an egg from a female, while women are the only physical child bearers. This is especially salient during prenatal diagnostic tests to determine genetic risks of the growing fetus. Ettore discusses the ramifications of available prenatal diagnostic technology in "Reproductive genetics, gender and the body: 'Please doctor, may I have a normal baby?'" The possibility of discovering disabilities before birth puts pressure on mothers regarding the decision to a) learn about the (dis)ability of their unborn child and b) whether or not to bring that child into the world. Ettore explains that the pressure on women is greatest because medical authority confronts them most directly. Their bodies are most closely equated with

“body as machine” discourse because they are literally building the baby in the womb (Ettorre, 2000, p. 406). Women serve as the very locus of production, and the pressure to produce a healthy baby is intensified when the technology allows monitoring and thus detection of disability, which is viewed as deviance.

The capacity for in-utero testing forces us to conceptualize the responsibility of having children; women bearing children where this technology is available are affected whether or not they employ it. Barbara Katz Rothman challenges us to remember that “to choose, to choose not to choose, to have, to have not, to bear, to bear not, is to bear responsibility” (Rothman, 1996, p. 53). Regardless of the mother’s moral persuasion or her situation, the stakes are instantly higher because she already took on “the burden of another person’s life” (p. 53). Rothman is a mother, a woman, and an expert in the field of prenatal testing, but also a woman who has never been in the position of deciding whether or not to undergo prenatal testing (p. 52). Yet she boldly states her indecisive judgment on prenatal testing. “Isn’t the fact that I don’t know, that someone reasonably smart, moderately thoughtful, a woman, a mother, terrifically knowledgeable about this—if I don’t know what I would do, doesn’t that tell you something?” (Rothman, 1996, p. 54). This tells us that a decision to have the testing done is one fraught with responsibility and controversy. First of all, the procedure is somewhat invasive and carries risks. Her hesitancy also communicates that the availability of the test is a pressure to women; it is another responsibility they must decide to take on or to cast off, all on the behalf of their unborn child.

Genes and Morality

The stakes of prenatal testing are high because of what a mother or a medical professional can do with the resulting information. Ettorre argues that a new morality of healthy bodies emerges when disabled bodies can be detected and aborted before birth (Ettorre, 2000, p.404). True, detection of disability before birth has the potential to discourage knowingly bringing disabled babies to term. Some argue that it is a burden to society to bring disabled and thus costly bodies into society (Ricci, 2009, p. 16), but prenatal diagnosis and the morality of a healthy body cannot override or transcend the moral debates surrounding abortion either. Though reproductive professionals or other sources of social power may try to evaluate bodies and genes normatively, “problems arise as attempts are made to make hard and fast distinctions between good and bad genes” (p.406). The good and bad in genetic material are not as black and white as they are in real machines; the analogy can be pernicious.

Though good genes and bad genes are problematic categories, we are persuaded to conceptualize potential heredity this way because as a whole, genomics and genetic science has privilege in American culture. In “Feminism confronts the genome,” Ettorre et al. expand on the critical and reflective qualities of feminist theory as they apply to the ideology of genetics, which is itself already critical in the sense that it engages with embodiment, bodily autonomy, etc (p.134). “What individuals actually face when they confront the genome has been mediated by biomedicine: they confront geneticized illness, and they confront issues of procreation” (Ettorre et al., 2006, p. 139). The very nature of procreation is entangled with genetics because we understand the genome too well to separate reproduction and health from that realm.

As impactful as reproductive genetic technologies and process are, the way we speak about them is even more powerful, for better or worse. Our reproductive knowledge, assisted by technology or not, is discussed in gendered and thus politicized terms. In “The egg and the sperm: How science has constructed a romance based on stereotypical male-female roles,” Emily Martin deconstructs the stereotypical gender roles that inform how scientists study and discuss eggs and sperm. Martin finds that the stereotypes used communicate that “female biological processes are less worthy than male, and that women are less worthy than men”

(p.29). The language used to discuss sperm is active and powerful, while passive language is used when discussing the role of the egg (Martin, 1996, p. 31). The suggested autonomy of sperm as compared with dependent eggs permeates the scientific literature about reproduction, meaning these stereotypical connotations with male and female gender characteristics are normalized in scientific and educational literature.

The Market for Genetic Material

Many reproductive genetic techniques start with the acquisition of eggs, sperm, or both. The market for reproductive materials is gendered because our very understanding of those materials is permeated by gendered language, creating very different experiences for men and women involved. Rene Almeling explains the forces at work in the market for eggs and sperm through three theoretical frameworks: 1) feminist discourse of sex and gender, 2) economic market factors of supply and demand, and 3) the medicalization of assisted reproduction. The market for eggs and sperm is distinct from other bodily commodities because these particular materials and the bodies that produce them are gendered, carrying cultural connotations and structural expectations associated with those respective genders (Almeling, 2007, p. 323). In the end, Almeling finds that more altruistic language is used to recruit egg donors and conceptualize eggs as compared to sperm donors and sperm (p. 326). While searching for donors, “both egg agencies and sperm banks place advertisements listing biological requirements (e.g., age), but egg agencies emphasize the ability to help while sperm banks portray donation as a job, an early distinction shaped by gendered stereotypes of parenthood that is maintained throughout” (Almeling, 2007, p. 336). Egg donors are paid far more than sperm donors because egg donation is far more invasive and eggs are less available than sperm. Despite this market valuation, women encounter advertising that urges them to consider the other in need of her precious eggs; the focus is on the assistive action as opposed to the compensation. This language is poised to appeal to women’s supposed nurturing nature and motherly instincts.

Changing Discourse

Though the commercialization of eggs and sperm has depended upon standard and longstanding sex stereotypes, reproductive genetic technology has simultaneously created new dialogues, forging completely new categories of identity. Novas and Rose defend genetic testing and genetic knowledge in “Genetic risk and the birth of the somatic individual” by problematizing the arguments against these technologies and results. Novas and Rose claim that genetic medicine and biotechnology have changed notions of personhood. The category of identity in focus here is the “person at genetic risk,” created with a) the understanding that many illnesses “have a genetic basis,” b) scientists’ claimed capability to “characterize the genetic sequences or markers” of the disease, and c) medicine’s claim that diagnostic tests can identify individuals at risk before the onset of symptoms (Novas & Rose, 2000, p. 486). Each of these conditions evidences that “life is now imagined, investigated, explained, and intervened upon at a molecular level” (p.487). The very context for understanding human life has been radically changed with the rise of genetic knowledge. Normalizing the molecular level of understanding in science and life further evidences the privileging of genetic science and thus the perceived immorality of choosing not to engage with it through prenatal testing.

Proponents of liberal eugenics urge the public to reconsider their very understanding of human nature to accommodate the molecular understanding of dynamic human biology. Elizabeth Fenton engages with the critics of liberal eugenics and successfully illuminates the shortcomings in arguments that rely on the concept of “human nature.” In “Liberal eugenics & human nature: Against Habermas,” Fenton cautions against the insistence that human

nature is intrinsically valuable and in need of protection because that position assumes “there are aspects of being human that are or that *ought* to be unchangeable” (Fenton, 2006, p. 36). Regardless of whether we find this argument persuasive about eugenic decision-making, it does require the problematization of a static human nature.

Scientific Authority and Ethics

Reproductive genetics and assisted procreation cultivate ethical dilemmas because they are somewhat uncharted territory, forcing humans to evaluate how they perceive scientific knowledge. Ricci articulates this well in “Assisted procreation and its relationship to genetics and eugenics.” Genetics lies uneasily between the realms of “science in its traditional sense (abstract, theoretical knowledge that does not directly influence everyday life, and is thus neutral) and technology or the application of scientific assumption, which is subject to judgments of an ethical nature” (Ricci, 2009, p. 7). Even if we have moved past conceptualizing science or any other kind of knowledge as “neutral,” information is at least most accessible and open to interpretation in its abstract sense before interpretation by scientists. The problem lies with the scientific community presenting potential future findings with the authority of tried and true science.

Too often with reproductive genetics “an invented scientific story reveals itself as anticipation of the technical reality, and this... forgets the objective difficulties of realization due to limitations imposed by our current knowledge” (Ricci, 2009, p.23). The public, eager to believe in expanded reproductive control, may be too easily caught up in romantic and abstract hopes about the capability of genetics to help make a better human population (i.e. eugenics). Ricci wisely recommends that we listen to those with disabilities (p. 22) and scientists themselves, not those pushing the development of diagnostic technology (p.23), when conceptualizing ethics for reproductive genetics.

In considering ethical procedures for reproductive genetics, medical discourse should be truthful, but the public’s interest and intellect should not be discounted either. As discussed earlier, society is conditioned to digest genetic knowledge. Genetic discourse and counseling could potentially help patients express their own agency, instead of limit their autonomy in interactions with medical personnel and technology. People actively think about their own bodies and wellness; they do not passively consume media portrayals of genetic debates (Bates, 2005, p. 424). The men and women interested in reproductive genetics are actively evaluating the information available to them, so it needs to be accessible and clear. The public often gets lost or misled because of distorted medical rhetoric that is twisted and used for political purposes (Bouffard et al., 2009, p. 387), but not because they are ignorant or lazy consumers of information. The language has the power to “sell” unrealistic expectations, like the “perfect child,” which is exceptionally problematic because it is undefined and unattainable (p. 387). Making reproductive decisions in a time of reproductive genetics implies the negotiation of many inputs from others regarding bodies, health, and procreation.

Regulation

The most controversial of these inputs is nation-state regulation. So far the discussion of reproductive genetic technology has implied a large degree of personal freedom and choice. But reproductive genetic decisions are not made in a vacuum, free from political and public policy. The FDA regulates sperm donation, requiring STD testing and medical documentation whether the donation takes place anonymously through an agency or privately and directly (St. Charles, 2013, p. 142). The only instance when the FDA is not involved is when sperm is transferred through intercourse.

Leigh-Anne St. Charles questions the constitutionality of this regulation based on the plethora of “contraception and abortion cases that declare reproduction a fundamental right under the theory of substantive due process” (p.143). It is ironic that only those participants who actually come in sexual contact are allowed to skip the STD testing while those who may never come in contact must undergo such tests frequently (St. Charles, 2013, p. 143). However, we must remember reproductive genetics often draws a wide range of families to the reproductive process, and they have unique needs.

If the government chooses to regulate reproductive genetic procedures, individuals most affected by those policies will likely be disenfranchised as they already experience underrepresentation in political arenas. More heterosexual couples are in the market for eggs while singles and lesbian couples make up a larger proportion of sperm buyers (Almeling, 2007, p. 325). This demographic difference communicates a potential power differential because the majority of voters are heterosexual couples while homosexual couples are not only the minority, but already face adversity fighting for reproductive options. Stakeholders in reproductive genetics have different needs. If those needs are not equally considered in legislative policy, ethics and regulation will once again echo historical eugenics in which the elite and powerful decide reproductive options for others.

Conclusion and Recommendations

We must include new voices in the discussion of ethical reproductive genetics to ensure no population is spoken for, but instead self represented. Is Reproductive Genetics a form of eugenics? Yes. Does it have the potential to cause the same issues as historical eugenics? Yes. But this is a risk because of the unequal powers at work, unequal access to decision-making about which genes to value, and unequal representation in the moral debate. Ethical standards need to regulate reproductive genetics, but this version of ethics must be multi-vocal and develop out of thorough social analysis.

References

- Almeling, Rene. (2007). Selling genes, selling gender: Egg agencies, sperm banks, and the medical market in genetic material. *American Sociological Review*, 72(3), 319-340.
- Bates, B. R. (2005). Care of the self and patient participation in genetic discourse: A Foucauldian reading of the surgeon general’s “My family health portrait” program. *Journal of Genetic Counseling*, 14(6), 423-434.
- Bouffard, C., Viville, S., & Knoppers, B. M. (2009). Genetic diagnosis of embryos: Clear explanation, not rhetoric, is needed. *Canadian Medical Association Journal*, 181(6-7), 387-391.
- Daniels, C. R. & Heidt-Forsythe, E. (2012). Gendered eugenics and the problematic of free market reproductive technologies: Sperm and egg donation in the United States. *Signs: Journal of Women in Culture and Society*, 37(3), 719-746.
- Ettorre, E. (2000). Reproductive genetics, gender and the body: “Please doctor, may I have a normal baby?” *Sociology*, 34(3), 403-420.
- Ettorre, E., Katz, B., & Steinberg, D. L. (2006). Feminism confronts the genome: introduction. *New Genetics and Society*, 25(2), 133-141.
- Fenton, E. (2006). Liberal eugenics & human nature: Against Habermas. *The Hastings Center Report*, 36(6), 35-42.
- Fox, D. (2007). Silver spoons and golden genes: Genetic engineering and the egalitarian ethos. *American Journal of Law, Medicine & Ethics*, 33, 567-623.
- Franklin, S. (1997). The embodiment of progress. In *Embodied Progress: a cultural account of assisted conception* (pp. 199-214). New York, NY: Routledge

- Güvercin, C.H. & Arda, B. (2008). Eugenics concept: From Plato to present. *Human Reproduction and Genetic Ethics*, 14(2), 20-26.
- Martin, E. (1996). The egg and the sperm: How science has constructed a romance based on stereotypical male-female roles. In Sargent, C., & Brettell, C. (Eds.), *Gender and health: an international perspective* (pp. 29-43). Upper Saddle River, New Jersey: Prentice-Hall.
- Novas, C., & Rose, N. (2000). Genetic risk and the birth of the somatic individual. *Economy and Society*, 29(4), 485-513.
- Ricci, M. L. (2009). Assisted procreation and its relationship to genetics and eugenics. *Human Reproduction and Genetic Ethics*, 15(1), 7-27.
- Rothman, B. K. (1996). Bearing witness: Representing women's experiences of prenatal diagnosis. *Feminism & Psychology*, 6(1), 52-55.
- This article is a later reflection on an earlier addition of *The Tentative Pregnancy*
- St. Charles, L.A. (2013). Regulating relationships: a challenge to the constitutional authority of the FDA regulation of private sperm donation. *Columbia Journal of Law and Social Problems*, 47(2), 141-169.