



Facing the Challenges of New Reproductive Technologies

The realization of women's sexual and reproductive health and rights, including ensuring access to appropriate reproductive technologies, has been a cornerstone in the fights for women's human rights and freedoms. This primer is a guide to the current debates on new reproductive technologies (NRTs), how they are changing political landscapes, and their potential effects on women's human rights.

'Reproductive technologies' (RTs) traditionally refers to a range of devices and procedures for assisting, preventing and/or manipulating contraception, fertility and reproductive practices. What makes **'new' reproductive technologies (NRTs)** different is not only their increasing effectiveness and invasiveness, but the globalized system of profit seeking and control in which they are being advanced. Not only are these technologies being used to manipulate contraception, fertility and reproductive practices, but they are creating new ways to have and influence characteristics of potential children. Never before have reproductive technologies been manufactured and marketed with such intensity. Vast amounts of resources are being put into these discoveries. Yet, the dialogue as to the ethics, potential dangers and consequences on women's bodies remains largely uncritical and unbalanced, often neglecting to examine the different experiences of NRTs depending on location, class, race, and gender.

Why NRTs are Significant for Young Women

Rich or poor, from the North or the South, women will encounter NRTs. The question is how, when and what NRT they will come across. Do young women have access to information about sexual and reproductive health and rights including contraceptives and reproductive technologies? Younger women in certain parts of the world are more accustomed to NRTs and use them readily, often without realizing the battles fought by earlier generations to ensure availability of these technologies and reproductive rights. For others, their reproductive choices are a constant battle. Yet, for the current generation constantly bombarded with new technologies of all kinds, new challenges arise. These young women have been brought up in a world where unprecedented

resources are filtered into the fields of science and technology. This means they must engage with and advocate in their own interests and in their own contexts - as NRTs affect young women differently.

Young women should be considering the following questions:

- What are the impacts of NRTs for/on me?
- How are NRTs being tested, marketed, promoted in my community?
- Are we becoming more accustomed to turning to techno-fixes for other 'problems' or challenges?
- Have we become more likely to accept NRTs without critical investigation of side effects or potential dangers?
- Who makes the decisions about the creation and control of NRTs?



Without critical interrogation of NRTs, women remain passive recipients and the pawns of multi-billion dollar NRT industries. As debates emerge around NRTs and their potential for misuse,¹ and as young women become more aware of their reproductive rights, women can be a crucial force in critiquing and ensuring just and safe production and marketing of these technologies. They are also a new generation within women's movements and have an opportunity to shed light on issues that are of importance to them, shifting the debates and contextualizing critical issues.

One of the problems we are facing in developing countries in Latin America is that we have prenatal testing but no abortion. Why are these [new technologies] being brought into our countries without full reproductive rights? They want to bring them in without engaging in the possible problems of them.

– Florencia Luna (Argentina)²

sterilizations, laws forbidding interracial marriages, and restrictive immigration in North America and Europe. Adolf Hitler used these ideas to justify his Nazi science experiments in the 1930s and '40s. Today, eugenic ideas still haunt family planning programs and reproductive decisions, particularly for women living in poverty who tend to be the targets of population control policies.

The historical context

As NRTs become more common and as more are promised, it is important to remember their historical and social context. Women's previous experiences with contraceptive and other technologies can be applied to NRTs, particularly as control of women's bodies and choices is taking new forms and greater invasiveness.

Reproductive technologies enable control and choice over reproductive decisions. Women have always controlled their own fertility, largely without the direction of a predominantly male medical establishment. Over the course of the 19th and 20th centuries, 'medicine' became a profession performed in hospitals and doctors' offices, taking healing out of the hands of women. Doctors began taking over childbirth and other reproductive health matters from midwives and traditional healers. Western medicine developed very specific expertise and control over women's bodies.

As women's health and reproduction became increasingly medicalized, there were other powerful ideas taking hold in North America and Europe. Scientist Francis Galton coined the term "eugenics" in 1883 to describe how theories of heredity could be applied to improving humanity by encouraging the ablest and healthiest to reproduce. Eugenics was used in the early 20th century to justify involuntary

Other influential ideas were those of Thomas Malthus and his successors who focused on population control as a solution to the problems of poverty and hunger. These ideas still permeate population control and family planning, as well as NRT development.

The technological infusion of materials, chemicals, hormones and pharmaceuticals changed earlier women-controlled contraceptive methods. Only in the early 20th century did doctors and scientists develop the capability to directly manipulate reproductive functioning with contraceptives and birth control interventions. New methods of contraception and birth control exploded after the 1950s. This boom in RTs over the following two decades included the discovery and use of a variety of different types of birth control pills and intrauterine devices (IUDs) - some much more helpful or harmful to women than others. Feminists have long been involved in debates surrounding reproductive technologies, fighting for access to birth control and abortion, and in the 1970s and '80s, focusing on a more holistic vision of health and well being and working for reproductive rights.

The late 1970s marked a shift away from a focus on contraception to assisted fertility technologies. The first test tube baby was born in 1978. In 1990, the Human Genome Project was launched, and the 'genome revolution'³ began with health, pharmaceutical, and fertility research focused predominantly on genes as the fundamental determinants of health. At the same time, processes of globalization have eliminated barriers to

research, development, and dissemination of new reproductive technologies. In a very short time, an explosion of technologies related to assisted reproduction and ‘new and improved’ contraceptive measures came into research and development, followed by critiques from a wide range of players including gender equality advocates. Spanning the decade of the 90s, developments such as microbicides, female condoms, improvements in IVF (in vitro fertilization) and other fertility treatments, numerous experiments on genetic manipulation, and cloning all came into fruition.⁴

In addition to the technological developments mentioned here, there has been a major shift of control of women’s fertility to governments, family planning agencies, and development organizations in recent decades. Uneven control, Malthusian beliefs on population and even eugenics have haunted many family planning policies.⁵ Now, critics of the unrestrained development of new human genetic technologies claim they have the potential to further technologize new eugenic or racist ideologies as well as exacerbate the differences between rich and poor.

Some of The Forces at Play

Debates around NRTs are becoming increasingly complex for a few reasons:

- The next generation of NRTs are sophisticated, technologically advanced, and invasive;
- We have a new generation of women dealing with them; and
- There are powerful forces acting and interacting to define women’s experiences of NRTs.

As these technologies are researched, developed, and marketed around the world, they utilize and benefit from processes of globalization and trade liberalization. To protect women’s rights we must incorporate the global nature of business, international institutions, governments, and science and technology into our analysis of NRTs, keeping in mind how women in differing realities and locations are exposed to technology. We also must consider the profitability of

technology, and the complexity of decision-making processes - that is, how and why decisions are made to introduce and promote NRTs in our communities.

Corporatization

‘Choice’ implies that you have options. In a market context, this means that you have things to buy and money to buy them. In an increasingly globalized, corporatized world, marketing of NRTs has become an important influence on their use and perception by women. For instance, some birth control pills in North America have been marketed to young women as treatments for acne. Increasingly, reproductive technologies are being marketed in both the North and the South. Some have identified an emerging trend in ‘reproductive tourism’. Women will travel to other countries to either avoid the legal restrictions in their home country or take advantage of lower prices for NRTs. For example, an IVF clinic in India advertises on the internet that their prices are cheaper than in the US and UK because “Indian doctors, like Indian computer professionals, have proven they are as good as anyone in the world, but because India is still a developing country, they charge much less than their colleagues in the West.”⁶

Marketing of technologies is an incredibly contentious issue, particularly as multinational pharmaceutical companies spend more money on promoting their drugs than on research and development.⁷ The marketing of ‘next generation’ assisted fertility technologies is an example of this and it also plays on the desire for the ‘perfect baby’ - by encouraging women to use NRTs to filter out perceived defects and choose socially desirable characteristics of their future children. The technological pursuit of ‘perfection’ reinforces the notion that perfection exists, and can be purchased, or ensured through techno-fixes. Many critics argue that

Bioethicist Arthur Caplan believes that “parents will leap at the chance to make their children smarter, fitter and prettier. Ethical concerns will be overtaken by the realization that technology simply makes for better children.”⁸



the motivations behind ‘improving’ our children are dangerously close to a new kind of market-based eugenics where those who can afford the genetic analysis to screen out ‘defects’ and select for desirable characteristics will be able to do so through technology.

Fundamentalisms

Many fundamentalist ideologies seek to impose an ideal of the family or of women that limits reproductive rights and autonomy. We have seen this for some time in the approach to abortion and access to contraceptives. We are seeing a mixture of responses to NRTs. These forces tend to be pro-life, pro-family, and pro-natalist focused on promoting fertility within the boundaries of the ‘traditional’ family.

Patriarchy

Most NRTs are developed within a Western-based model consisting of the ‘medical, male, rational’ as the ‘expert’ who designs ways to control women’s bodies - mostly in relation to fertility control. Historically, women have been seen as irrational; their bodies to be tamed, controlled or colonized. The development and marketing of NRTs is moving control of procreation, not just contraception, further into this male, rational and controllable world. In the meantime, women’s wombs are becoming laboratories for invasive and often risky reproductive technological interventions.

The development and use of NRTs has been led by men, seldom focused on women’s needs, or on women’s health and rights. In fact, many of the new fertility technologies, including sperm sorting and cloning, were originally developed for animals, for use in food production. They have now been aimed at women. Women’s bodies are increasingly becoming the suppliers of genetic material for creating life outside of the womb and providing the raw material for scientific research driven by a patriarchal agenda.

Do NRTs help or hinder women’s rights?

NRTs *do both*—help and hinder women’s rights. When women have access to them, NRTs enhance women’s reproductive freedom, allowing them to further control their own fertility. But when NRTs are used as a part of population control policies and forced sterilizations, women’s rights are certainly violated. Women’s rights are also hindered when their bodies are used as testing sites for new reproductive technologies without adequate protection for their rights, health, and for prior informed consent. NRTs are increasingly able to help manipulate the very

HOW THE FORCES COLLIDE

The evolution of the HIV/AIDS pandemic has necessitated new technologies protecting people from not only unwanted pregnancy (e.g. the Pill) but also from transmission of STIs - especially HIV (e.g. microbicides and the female condom). Questions surrounding the efficacy of such technologies have been rife, including: Why are we focusing on women-controlled methods of protection? Are women really in a better place to negotiate their sexual interactions than they were two decades ago? Don’t these technologies essentially put responsibility for the pandemic in the private sphere and in the hands of women? When are we going to start focusing on gender inequalities and male responsibility for reproduction and protection from STIs and HIV? Questionable use of resources and time are also key issues being raised when developing NRTs. Who will be able to access these? Who is really going to benefit - those vulnerable to HIV, those who can afford to buy the NRTs or the companies manufacturing these products? Who is dictating the research agenda for HIV/AIDS and how are decisions surrounding the funding of initiatives and campaigns being made; and by whom? The responses to HIV/AIDS are an illustration of how seemingly medical issues become intertwined with political, social and gender inequalities - often times fuelling them.

characteristics, ways and qualities for which eggs, embryos, and eventually children are created and selected.

Some of the issues and new questions potentially impacting on women's rights and gender equality are:

► **Corporations and industry seeking to market new technologies are influencing structures regulating their development.** As industry has a substantial amount of money, they tend to have a disproportionate amount of lobbying power. As many of the industries developing NRTs are located in the North, this allows for a power imbalance, where Northern values and priorities dictate the agenda for the development and regulation of NRTs. A great deal of the money that goes into research comes from the private sector, which has a vested interest in ensuring that research and discoveries take place.⁹ Since governments need money flowing into their economies, this leaves a worrying situation where legislation is influenced by capitalism and corporate interest. What does this mean in terms of conflicts of interest? How can corporations balance the need for profit making with ensuring public safety and ethical behaviour?

► **While NRTs do give women some control, they are not necessarily the appropriate technologies for women's needs.** For example, the quinacrine sterilization method could provide a non-surgical permanent sterilization that is cheap and relatively easy to administer. Yet it is not the kind of technology that women need and its potential for misuse is great. The contraceptive pill is a similar case: many women around the world use this method of contraception, yet it does not prevent the spread of sexually transmitted infections like HIV/AIDS and requires women to take daily doses of hormones which in the long term may be harmful to their health. As more NRTs are developed, including the next generation assisted fertility technologies and the contraceptive vaccine; women must continue to ask questions about whether or not these are the most appropriate technologies for them.

Quinacrine, originally used as a malaria drug, has been used to chemically sterilize more than 100,000 women in around twenty developing countries.¹⁰

► **NRTs are changing human reproduction - moving it from the bedroom to the laboratory.**

NRTs present new dilemmas. For instance, NRTs such as pre-implantation genetic diagnosis, cloning, and even IVF are beginning to redefine how human life is being created, as well as who and what can be reproduced. Not only can an embryo now be created outside of the body, but technologies such as the 'artificial womb'¹¹ would allow for an embryo to be brought to term entirely outside of the woman's body in an experimental environment. Serious ethical questions arise in terms of how these kinds of procedures will be tested. Can we really replace a woman's body with something that is artificially created? Does someone who can afford to pay for this type of technology have the 'right' to utilize it? Do we want to be able to buy life?

► **Most NRTs are expensive, available only to the richest in the world.** Assisted fertility NRTs have been sold to predominantly rich women in the North, although increasingly they are being marketed and sold to the richest in the South as well, creating a scenario of class-based discrimination. For instance, testing of contraceptives, including Norplant, Depo-Provera, and quinacrine has been conducted on women living in poverty. These two realities seem to indicate separately evolving reproductive rights - where some women have expanding choices and others have increasingly less. NRTs are exacerbating this difference. As the majority of the world's poor are women, this presents serious

questions about who will actually be accessing these types of technologies and why.

► **There is serious concern over the commodification of human life and the marketing of women's bodies.** The recent trends of patenting life forms (both plants and animals), genetic material and indigenous knowledge have evolved because the owner of the patent can make increasing amounts of money through the trade and sales of the 'product' created. Policies in some countries make the selling of one's eggs and surrogacy services (as products) illegal.¹² These policies are based on a principle of non-commodification where it has been recognized that the harvesting and selling of life forms is problematic. Yet, even as these



"The Council for Responsible Genetics (based in the U.S.) unequivocally supports a woman's right to make her own reproductive decisions .

However , we oppose the utilization of human eggs and embryos for experimental manipulations and as items of commerce because of the potential for eugenic applications and health risks to women and their offspring".¹⁴

practices are banned in some countries, there remain opportunities and reasons for women in other countries to engage in them. Judy Norsigian (co-founder of the Boston Women's Health Book Collective) worries that financial incentives may encourage low-income women to take unnecessary risks to donate eggs for experimentation by taking potentially dangerous drugs or undergoing risky surgeries.¹³

► **NRTs are challenging choice" as the central value to reproductive rights.** As new questions are raised, many feminists are hesitant to endorse regulations that would ban NRTs, because they fear a ban would limit choice. The right to control or choose one's fertility is very different than applying more commercial notions of choice. The use of pro-choice language by those seeking to promote NRTs "is likely to foster confusion between the unprecedented and unjustifiable practice of 'enhancing' the genetic makeup of a future child, and the fundamental right to end an unwanted pregnancy" according to Marcy Darnvosky. To differentiate the use of this language, she suggests "it will take focused effort to make it

clear that altering the genes of one's children and the genetic legacy of humanity is not among the reproductive rights for which so many women and women's organizations have struggled."¹⁵

The Way Forward

In order to promote women's health and rights everywhere, we must be aware of new and changing debates and ensure that critical analysis takes into account the real effects of NRTs on women's lives throughout the world:

- **Young women in particular, are a generation that has frameworks in place - international human rights treaties and programs of action - taking into account sexual and reproductive rights.** Young women can use existing frameworks (such as the outcome documents of the ICPD conference in 1994 and Beijing in 1995) as entry points for mobilizing around NRTs. This generation can ask: Who is developing these NRTs? For whom are they being developed? How can we be pro-active in our activism and advocacy in order to utilize existing mechanisms as well as creating our own means in which to ensure the protection of all women's health and rights?
- **How can we ensure that the debate around 'choice' is not used to divide gender equality advocates - blurring the much needed analysis and critical dialogue on NRTs?** Are we comfortable with the increasingly separate or stratified concepts of reproductive rights, based on race, class, and geographic location? The division

Some organizations are trying to redefine their struggle for reproductive rights in light of NRTs. The Asian Communities for Reproductive Justice, based in California, USA, presents a new framework for their work: "Because the control, regulation, & stigmatization of female fertility, bodies, and sexuality damages women's lives AND is connected to the regulation and control of different communities based on race, class, gender, sexuality, and nation - we fight for Reproductive Justice for women - when women (and by extension communities) have the political, economic, social and cultural power to self-determination & autonomy, to making healthy choices for self and family at work, home, school, and all areas of life."

between women who can access certain resources and those who cannot is growing.

■ **Who are our allies when addressing NRTs?** For instance, if we take a precautionary stance around NRTs and their effect on women's health and rights, it is essential to know who else is sounding alarm bells and why. Certain fundamentalist groups are very cautious when it comes to NRTs and their use; however this is for entirely different reasons than those of women's rights advocates. Together with our allies we can build networks, learn from each other's experiences and ensure women's health and rights are protected.

■ **The forces of globalization, capitalism, patriarchy, scientific and medical establishments, and their impact on the creation, dissemination, and uptake of NRTs has not been adequately contextualized in existing debates and policies.** Technologies are being created and marketed in a global context like never before. Given women's experiences with reproductive technologies and past struggles for reproductive rights, it is crucial that women's movements and gender equality advocates take notice of the radical changes and act together. Regulation and the protection of women's rights before profits is our number one priority.

Endnotes:

- ¹ Sharma, Dinesh C. "Illegal tests done on 790 Indian women." *Hindustan Times*, 18 January 2004.
- ² Samson, Ann Elisabeth. Personal interview, 22 Mar. 2001.
- ³ Rapp, Rayna and Ginsburg, Faye. *Standing at the Crossroads of Genetic Testing: New Eugenics, Disability Consciousness, and Women's Work*. 2002.
<<http://www.gene-watch.org/genewatch/articles/15-1crossroads.html>>
- ⁴ The announcement of the birth of the cloned Dolly the Sheep met great excitement in 1997.
- ⁵ Women in Peru, for example, have recently felt the effects of the Program for Reproductive Health and Family Planning, a population control policy encouraging sterilizations. Critics have pointed out that the campaign for sterilization has targeted poor and indigenous women, who have been "pressured and bribed or deceived into accepting surgery." Some feminists have argued the policy's goal, as others around the world, was to "reduce the birth rate as a way to combat poverty," a Malthusian notion. Schmidt, Brita. "Forced Sterilization in Peru" in *Political Environments #6*, Fall 1998.
<http://www.cvpe.org/issues/population_html/schmidt.html>
- ⁶ Malpani Infertility Clinic. <<http://www.ivfindia.com/services.htm>>
- ⁷ According to a study of nine pharmaceutical companies and drug prices by Family USA, marketing, advertising, and administration account for 32% (average) of total revenue as compared to 13% to research and development. *Off the Charts: Pay, Profits and Spending by Drug Companies*.
<<http://www.familiesusa.org>>
- ⁸ Arthur Caplan is a Bioethicist at the University of Pennsylvania. Caplan made these statements in an online interview with abcnews.com as reproduced on
<http://www.genetics-and-society.org/resources/cgs/2000_asilomar_letter.html>.
- ⁹ Asif Ismail, "Regulating Cloning: The biotech industry pushes its agenda in the states" found on Genetics and Society website <<http://www.genetics-and-society.org/newsletter/index.html#II>>
- ¹⁰ Samson, Ann Elisabeth. "The quinacrine controversy: a help or hindrance to women's rights?" in *AWIDNews* Vol. 15, No. 3, Summer 2001. <<http://www.awid.org/publications/news/Summer2001.pdf>>
- ¹¹ Lynette Clemetson, "For Abortion Rights Cause, a New Diversity," *NY Times*, 24 April 2004.
- ¹² Laws regulating the buying and selling of eggs and sperm are on the books in France, Germany, Italy, Switzerland, Australia, Brazil, Peru, Austria, China, South Korea, and Canada.
- ¹³ Stevens, Alison. *Cloning Debate Splits Women's Health Movement*, 9 June 2002.
<<http://www.womensenews.com/article.cfm/dyn/aid/935/context/archive>>
- ¹⁴ The Council for Responsible Genetics. Women in Biotechnology.
<<http://www.gene-watch.org/programs/women.html>>
- ¹⁵ Darnovsky, Marcy. *Human Germline Manipulation and Cloning as Women's Issues*, 20 November 2000.
<<http://www.ourbodiesourselves.org/clone2.htm>>

The Association for Women's Rights in Development is an international membership organization connecting, informing and mobilizing people and organizations committed to achieving gender equality, sustainable development and women's human rights. A dynamic network of women and men, AWID members are researchers, academics, students, educators, activists, business people, policy-makers, development practitioners, funders and others, half of whom are located in the global South and Eastern Europe.

AWID's goal is to cause policy, institutional and individual change that will improve the lives of women and girls everywhere. Since 1982, AWID has been doing this by facilitating on-going debates on fundamental and provocative issues as well as by building the individual and organizational capacities of those working for women's empowerment.

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Definitions of some NRTs

- **In vitro fertilization (IVF):** a procedure in which a woman's eggs are removed and fertilized in a laboratory.
- **Surrogacy:** an arrangement where a woman (the surrogate) bears a child for another person.
- **Pre-implantation genetic diagnosis (PGD):** diagnosis through IVF which allows parents/doctors to choose which embryos to implant.
- **Sperm sorting:** the separation of male sperm from female sperm before fertilizing an egg.
- **Cloning:** the creation of an exact copy of existing genetic material.
- **Human cloning** would involve creating cloned embryos with the intent of implanting them in women to produce children.
- **Research cloning:** the creation of a cloned embryo for research purposes - for example, to make embryonic stem cells. The first successful research cloning experiments were announced in February 2004.
- **Inheritable genetic modification** (or germline modification) would change genes in eggs, sperm, or very early embryos (this not yet happening).

For more detailed definitions of NRTs, please visit the AWID website: <http://www.awid.org/ywl/glossary>

More information on the current debates

New Reproductive Technologies and the Indian Woman

Written by R.P. Ravindra, this article provides a South Asian perspective on NRTs and their affect on women.
<http://www.hsph.harvard.edu/Organizations/healthnet/SAsia/suchana/0400b/h022.html>

Our Bodies, Ourselves (formerly Boston Women's Health Book Collective)

A wide array of articles on topics such as: Cloning as a women's health issue, promotion of pharmaceutical drugs in advertising, microbicides, pre-natal testing and disability rights, and reproductive health activism.
<http://www.ourbodiesourselves.org/issues.htm>

Center for Genetics and Society

Many articles related to the concerns of human cloning and inheritable genetic modification and their effects of women's health and reproductive rights.

<http://www.genetics-and-society.org/perspectives/women>

Also, an overview of new genetic and reproductive technologies, the arguments for and against them, as well as history. <http://www.genetics-and-society.org>

HIV In Site

Links to numerous organizations and sites with information on new reproductive technologies, especially female controlled prevention technologies such as microbicides and the female condom

<http://hivinsite.ucsf.edu/InSite?page=li-07-10>

The Committee on Women, Population and the Environment

Background material on the feminist critiques of sex selection and contraceptives from a wide array of authors
<http://www.cwpe.org>



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