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**MAGIC BULLETS:
POPULATION CONTROL DISCOURSE AND THE SHAPING OF
CONTRACEPTIVE TECHNOLOGY**

by

Julie Delahanty

A Thesis Submitted to
the Faculty of Graduate Studies and Research
in partial fulfilment of
the requirements for the degree of

Master of Arts
The Norman Paterson School of International Affairs

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Maureen Appel Molot

Maureen Appel Molot, Director
The Norman Paterson School
of International Affairs

B. Dawson

Professor B. Dawson, Supervisor

Abstract

The belief that "overpopulation" causes poverty, environmental degradation and political instability is deeply ingrained in Western society. The proposed solution, the provision of modern contraceptive technology, perpetuates the notion that, by procreating, the poor create their own problems. The discourse which maintains population control as the solution to the world's problems has become so pervasive that questions about social, economic and political power are too often overlooked. In this study, the author examines the shifting discourse in the population debate. This discourse has led to the development, production and promotion of technologically sophisticated contraceptive technologies which carry great health risks for women, while other methods of fertility regulation are ignored. This thesis seeks to understand the complexity of the population issue and to unravel the connections between population control discourse and the development of contraceptives. Using the anti-fertility "vaccine" as a case study, the analysis demonstrates how technology is shaped by social, economic and political factors in the context of population control.

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Dr. David Long's interest in my work and perspective, his (incredible) understanding of theoretical problems, and his sense of humour has provided me with support, insight, and considerable mirth. For all of these things, I thank him deeply.

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Finally, I am extremely grateful to the Social Sciences and Humanities Research Council for providing me with financial assistance in this project and also to those groups which provided funding for me to attend the ICPD, including OPIRG, CUPE 2323, GSA, NPSIA and Graduate Studies and Research.

Dedicated to the memory of

Kwan Chi Hung

a.k.a.

Roger Rainbow

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Technology in the Third World, I explored the use of indigenous and natural methods of contraceptive technologies in developing countries. My interest in population policy grew out of this course work and contraceptive technologies in the context of population control became the focus of my research.

The necessity of doing research on an issue related to science and technology stems from the constraints of my scholarship. Holding the Joint SSHRC/NSERC Scholarship in Science Policy during the two years of my master's programme meant that my thesis work was to be focussed in this area. As a result, whenever my interest drew me away from technology issues and into the debates around population policy in general, I needed to remind myself of my requirement to stay focused in the area of science policy. While this may have constrained the choices I made, in the end it was invaluable in preventing me from falling into theoretical abstraction and in allowing me to ground my knowledge in a solid critique of technology. As a result, I hope this thesis will act as a starting point for the advocacy of more rational policies in the area of contraceptive technological development.

Population Control vs. Reproductive Freedom

In order to understand the impact of population control policies on technology and on women's lives, it is necessary to understand the term "population control." Population control is the systematic control of a society's birth rate through fertility control or control of migration. It is based on population or fertility targets set by national governments and international institutions, such as the World Bank. Population control in the Third World usually involves programmes which seek to reduce birth rates. These programs rely on targets, incentives, disincentives and the distribution

These issues are addressed throughout my paper and are implicit to my critique of population control. However, in this thesis I add to the literature by examining how the discourse around population control affects not only contraceptive service and delivery, but also has a profound influence on the direction of contraceptive research. Using feminist critiques of technology, I build on the analysis of population control in order to make clear the links between population control discourse and the kinds of contraceptive technologies which are being developed.

Contraceptive research is conducted with a view to controlling women's fertility, not to increasing women's options, health or power. As a result, these technologies may act to disempower women. Emphasizing the problems with the service and delivery of contraceptive technologies tends to "obscure the way in which historical and social relations are built into the very fabric of technology" (Wajcman, 1994: 159). As Wajcman (1994) points out: "While recognizing the social shaping of women's choices, few participants in the debate acknowledge that the technologies from which women choose are themselves socially shaped" (1994: 159). This paper is an attempt to understand the social and political shaping of contraceptive technologies.

Finding the Right Fit - Methodological Issues

Decisions regarding my research topic and question and the methodology which I should use were, for me, issues of some complexity.

America, Western Europe, Australia and Japan. Included in these terms are "North and South," "developed and developing" and "Third and First World." While I use all of these terms throughout my paper, I concur with the women from Development Alternatives for a New Era (DAWN) that the term Third World best describes the political reality of inequitable and exploitive economic, social, political and cultural relationships which exists between these countries.

These decisions began with my belief that research should further goals of social justice, in particular, the goals of women. There are various interpretations of feminist methodology and there are critical debates between feminists on both methodological and epistemological issues. One of these debates concerns the desirability of adopting the view that the emancipation of women should be the goal of research. It is my view that feminist research must start from a political commitment to the empowerment of women and, at the same time, define new ways of knowing and of seeking truth. As Maria Mies (1983) writes:

Research, which so far has been largely an instrument of dominance and legitimation of power elites, must be brought to serve the interests of dominated, exploited and oppressed groups, particularly women (1983: 123).

Feminist methodologies have developed in the context of power struggles over "ways of knowing." A critical contribution has been the recognition that there are many different ways of seeing a particular piece of knowledge because all research is based in the social world. Where one stands in that world can influence the different aspects of knowledge which one will observe. This understanding is not intended to lead to a relativist position in which there is *no* knowledge. It posits that what we see and how we construct what we see can be interpreted in myriad ways (Kirby and McKenna, 1989: 25). Thus, "there is no alternative to political commitment in feminist or any other ways of knowing. Since knowing is a political process, so knowledge is intrinsically political" (Ramazanoglu, 1992: 210).

Recognizing that any research I do is, in part, a political process influenced the kind of research I chose to do. I was particularly conscious of

the critique of Western feminism advanced by many Southern feminists. Third World feminists, such as Mohanty (1991) and Amadiume (1987), have argued that Western feminists have simply used Third World women as a source of "raw data" to further their own ends. As a result, in their view, Western feminists have constructed Third World women as a monolithic category and have portrayed them as a powerless group. In defining my research question, I sought to identify issues which were based on women's experience and find ways of understanding the various reproductive issues women face in the First and Third World. Identifying commonalities in these struggles in order to create a space out of which to develop analysis was an objective of my research.

I attempted to fulfill these goals in a number of ways. My recognition of the global significance of population control meant that I had to pursue sources of information in ways additional to the usual library searches. My first step was to develop a broad understanding of the critiques of population control from Southern as well as from Northern perspectives. In order to develop this critique, I attempted to forge links with Southern activists. Attending the International Conference on Population and Development (ICPD) in September, 1994 was a key step in creating this link.

One of my original intentions in attending the ICPD was to interview Southern delegates in order to engage with them in a discussion of their perspective. This plan quickly proved both practically and methodologically problematic given the complexity and diversity of representation. While I would have gained valuable information about any particular group which I chose to interview, the sheer number of groups at the conference made it clear that any information I received would certainly be of no value in any statistical sense. The interviews, however, proved unnecessary for my needs

since the significance of the issues was apparent without personal interviews. Throughout the conference, I spoke with many women and regularly attended the Women's Caucus meetings, held each morning, in order to hear women from different regions of the world express their concerns and opinions on the issues. Further, engaging in the debates in Cairo clarified for me the comparative positions of First and Third World nations and, in particular, the Canadian position. Finally, thinking about the role of technology while simultaneously addressing the larger mandate of the ICPD, that is, population and development, allowed me to make important links between these issues.

The second area in which I attempted to make links between First and Third World women was in the use of collected women's stories, which form the basis of my critique of the population establishment found in Chapter 4. These stories, collected as part of a project sponsored by the women's health collective (of which I am a member), Women's Health Interaction,² were intended to be published in an accessible booklet form, along with information on population control programs and fact sheets on the effects of the drugs, devices and technologies themselves. Unfortunately, this aspect of the project foundered because the stories did not come in the form in which the original project was intended, and the funding for the project was uncertain. It was agreed by the members of the collective (WHI minutes, February, 1994) that I would look at the stories in the hope that they could be used to in my thesis and that we could use that work for future animation purposes based on the original project. The participants who submitted their

² Letters were sent by the Ottawa based NGO, Inter Pares, asking that their partners conduct interviews with women in their respective communities. This letter was also sent to groups and individuals in North America. As a result, there are stories from women in both the First and Third Worlds.

stories agreed to have them used in the manner outlined above. However, all the participants were re-contacted and asked for permission to use the stories in my thesis (see Appendix 2). The stories, which came in very different forms, contained consistent themes about the negative impacts of top-down population control programmes. Further, the commonalities between the stories from women in the First and Third World revived my belief that working for a common purpose is possible.

The third area of linkages occurred as a result of my case study on the contraceptive "vaccine." In January of 1995, Women's Health Interaction (WHI) was approached by the Women's Global Network for Reproductive Rights, located in the Netherlands, with the possibility of hosting an international strategy workshop on the contraceptive "vaccine." As a result, in June, 1995, WHI hosted 35 women from 14 countries around the world. Participating in this meeting was a unique opportunity for me to further discuss the issues surrounding both the "vaccine" and population control. The information-sharing which took place at this meeting provided me with a much deeper understanding of the issues around this particular contraceptive technology as well as around issues of population and women's health generally.

Finally, my research was significantly influenced by both the institution in which this work was conducted and the funders of my research. When I began my master's programme, I proposed to do research on the transfer of breastmilk substitute technology to developing countries. However, when I began my course work at the Norman Paterson School of International Affairs, because of the personal interests of potential supervisors, I was encouraged to explore alternative forms of contraceptive technology, including lactational ammenhorea. In a course on *Science and*

Technology in the Third World, I explored the use of indigenous and natural methods of contraceptive technologies in developing countries. My interest in population policy grew out of this course work and contraceptive technologies in the context of population control became the focus of my research.

The necessity of doing research on an issue related to science and technology stems from the constraints of my scholarship. Holding the Joint SSHRC/NSERC Scholarship in Science Policy during the two years of my master's programme meant that my thesis work was to be focussed in this area. As a result, whenever my interest drew me away from technology issues and into the debates around population policy in general, I needed to remind myself of my requirement to stay focused in the area of science policy. While this may have constrained the choices I made, in the end it was invaluable in preventing me from falling into theoretical abstraction and in allowing me to ground my knowledge in a solid critique of technology. As a result, I hope this thesis will act as a starting point for the advocacy of more rational policies in the area of contraceptive technological development.

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In order to understand the impact of population control policies on technology and on women's lives, it is necessary to understand the term "population control." Population control is the systematic control of a society's birth rate through fertility control or control of migration. It is based on population or fertility targets set by national governments and international institutions, such as the World Bank. Population control in the Third World usually involves programmes which seek to reduce birth rates. These programs rely on targets, incentives, disincentives and the distribution

of modern methods of contraception in order to meet national demographic targets. Such programmes are coercive in their approach, offer only a limited selection of contraceptives, promote sterilization and other long-term methods which are provider-controlled (i.e., where women need a service provider to use or to discontinue the method), and have not pervasively provided women with complete information on risks and benefits of the contraceptive method (Canadian Women's Committee Report, 1994: 7).

Population control also includes policies which encourage more births. For example, the Quebec government's desire to maintain its francophone cultural and linguistic identity and to maintain economic viability has led to the adoption of a policy to encourage births by offering economic incentives. A woman receives \$500, \$1000, or \$8000 after the birth of her first, second and third child respectively (Gouvernement du Quebec, 1993: 18). While offering such attractive incentives for giving birth to more children, the Quebec government is also cutting social programmes which could provide more long term support to women and families (Canadian Women's Committee Report, 1994: 12).

Throughout this paper, I contrast the notion of population control with the notion of reproductive freedom. Reproductive freedom implies that the conditions are in place for a woman to determine, in the absence of coercion, whether to bear children and how many children she wants. In this sense, reproductive freedom involves issues of power and control at almost all levels of people's lives, from the family to international economic structures (Hartmann, 1987: 7). Recognizing this reality has allowed women to define reproductive freedom more broadly than the traditional emphasis on questions of contraception and abortion. Mary Ann Mulvihill, for example, defines reproductive freedom in the following way:

Reproductive freedom implies that women [are] empowered, have access to the resources to feed, clothe and house themselves and their children and it also implies freedom from violence in its many forms. And that includes the physical, emotional and sexual violence inflicted on women by men as well as the violence of poverty and racism in women's day-to-day lives...So, in a sense, reproductive freedom represents the world we are struggling for that would incorporate all of women's knowledge, needs, and experience, where women would be fully equal in the social, economic, political and cultural activities of the community, where people and countries share their wealth and resources and where people value each other and work together cooperatively (Mulvihill, 1991: 3).

Thus, reproductive freedom involves achieving basic rights in almost every sphere of life. As Hartmann (1987) suggests, while reproductive freedom is an intensely, personal experience, it is important not to lose sight of the fact that it is a central social experience as well (1987: 54).

Throughout my thesis, I critique the notion that population growth is the fundamental problem restricting development in the Third World. This notion obscures the unequal distribution of wealth and power, both within Third World countries and as a result of international economic structures. Rapid population growth is not the cause of underdevelopment; it is a symptom. Blaming population growth for the problems of both poverty and environmental destruction, has allowed Western nations to avoid responsibility for these problems. Thus, the dilemma of poverty and environmental degradation will persist since the proposed solution (mass distribution of contraceptives) is built on a false understanding of the problem. Maria Mies and Vandana Shiva (1993) who argue that seeking population reduction will not solve these problems, suggest that it would be more fruitful:

...to directly address the roots of the problem: The exploitative world market system which *produces* poverty. Giving people rights and access to resources so that they can generate sustainable livelihoods is the only solution to environmental destruction and the population growth that accompanies it (1993: 285).

Those advocating population control suggest that over-population is a problem which is so urgent that development cannot act rapidly enough. By constructing population growth as a crisis, the solution necessarily becomes the distribution of effective methods of modern contraceptive technologies, even under coercive conditions.

There is a crucial difference, then, between those who see family planning as part of the *overall* strategy to change the myriad social forces which work to keep birth rates high and those who promote family planning as an alternative to social change. Those who accept the latter proposition might advocate very different kinds of family planning programmes and contraceptive technologies than those who view family planning as providing women with the means to control their own lives.

I begin this thesis by critiquing the dominant understanding of technology as objective and neutral. I analyze, in Chapter 2, how sexual, racial, and economic politics can profoundly influence the direction and pace of technological change. This analysis, based on the feminist critiques of science and technology, is a necessary step in understanding how reproductive technologies are shaped by societal and political forces. I conclude by suggesting that, in developing an alternative analysis of reproductive technologies, and contraceptive technologies in particular, it is necessary to ground this analysis in the lived experiences of women and to

integrate contextual dimensions such as the social, political and economic situation in which they live.

In Chapter 3, I contextualize the issue of contraceptive technology, placing it squarely within the dynamics of the population control discourse. I examine the discourse surrounding the meaning of population control. While the discourse has shifted to accommodate challenges to it, I show that the dominant themes consistently posit that over-population is a major international crisis and that the best way to address that crisis is through the provision of modern contraceptive technologies.

In Chapter 4, I argue that these dominant themes have remained strong, despite challenges, both because of the institutional structures which support them and the interests which legitimate them. I define the "population establishment" and show how it maintains the dominant themes found in the mainstream population discourse.

The population establishment maintains that population control is beneficial not only to the well-being of nations, but to women as well. It is important, however, to see how the top-down population policies advocated by the population establishment have had negative impacts on women. Thus, I examine testimonials from women around the world who have shared their experiences of population control. Through these testimonials, I identify a number of problems with both family planning services and with contraceptive technologies themselves. By outlining what reproductive health services ideally should consist of, I show how the context of population control in women's lives has meant that this ideal has not been reached. Through these stories it becomes clear that, while having access to safe and effective methods of contraception is critical for women, they want this under very specific conditions. Women often reject the current selection

of contraceptive methods because they have been designed without their needs in mind (Chetley, 1994: 17). However, despite calls for change based on women's needs and wants, the discourse of the population establishment continues to win mainstream appeal. Moreover, within this discourse, certain elements have been "naturalized" or become intuitive "common sense." These elements include: the assumptions of eugenics (an historical forerunner of the population control movement), with its implicit racism; the fostering of perceived security interests of northern countries in controlling populations in the developing world; and the acceptability of profit motivations. These elements and the interests they represent, in turn perpetuate the mainstream discourse.

Moving from this general discussion of population discourse and family planning, I examine the specific problems with the development of contraceptive technologies using a case study of the contraceptive "vaccine" in Chapter 5. I demonstrate how this emerging technology has been developed based on the needs of population control policies rather than the needs of women. The biases inherent in the kind of research which leads to contraceptives such as the contraceptive "vaccine" echo the themes of population discourse and the interests of the population establishment.

Yet, while it is tempting to look at the vaccine and focus only on the obvious risks it carries, doing so creates the misconception that there are only a few contraceptives which are the problem and that if these problems are solved then everything will be fine. This is, unfortunately, not the case. The problem is not a few bad apples in the contraceptive research programmes, or in their methods. The problem is the way in which population control structures the overall direction of contraceptive research. I examine problems with the vaccine in order to demonstrate that technologies developed in this

context are unlikely to be liberating for women, as has been claimed, as well as being technically highly unlikely to "succeed," however that is defined.

I conclude, in Chapter 6, by suggesting that understanding the role of technology helps us deconstruct the negative impacts of population control. Articulating the criticism of technology can move women closer to empowerment in their lives by further making clear the politics which surround women's lives and bodies. O'Sullivan (1987) summarizes the issues succinctly when she writes:

A feminist approach to birth control would have to take into account the present range of options women have, the context in which those choices are made and what future developments we want to see... After all we must insist that birth control, like other health care, exists for us, not we for it (1987: 27).

Chapter 2

The Third Eye: Embodying Technology³

Introduction

In order to understand the ways in which contraceptive technologies have been shaped by the political discourse of population control, it is first necessary to demonstrate that technologies can be shaped by external influences. The widespread belief that technology stems from scientific research which is, by definition, objective and neutral, makes this point somewhat controversial. Objectivity and neutrality have been identified as the key elements of positivist scientific method and as being essential to produce true knowledge. The belief that technologies themselves are also neutral stems from this view of science.

Scientific method in the West is a way of separating knowledge from experience. Objectivity and neutrality are considered the hallmark of what separates true scientific method and its pursuit of knowledge from other methods of defining knowledge. Mainstream scientific methods texts, for example, argue that,

... the scientist is careful... not to exclude any facts because of personal bias, but allows every fact to contribute its share to the total picture... the non-scientific person however... may allow some bias to influence his (sic) selection of facts... (Brown and Ghiselli, 1955: 12).

³ In her book, Murder in the Dark, Margaret Atwood has conjured the image of a "third eye...the eye of the body." Using the body to "see" the world in a different way and, particularly, as a way of understanding technology is a theme I pursue throughout this thesis.

Scientists do not believe that gender, race, and class have any bearing on scientific work since these are purely social issues while science is an activity which is devoid of any connection to social behaviors (Longino and Hammonds, 1990: 178). On this view, it follows that science cannot be implicated in the "legitimation of society's gendered beliefs and norms" (Bleier, 1988: 149).

The notion that science is devoid of connection to social behaviors is, in part, based on the dualism of Western thought which attempts to separate objectivity from subjectivity. The history of the masculinization of scientific method and technological development is, similarly, based on the gendered dualism of Western thought.⁴ Karen Warren (1987) points out that the problem is not the dualism as such, but that the dualism is normative.

⁴ The origin of normative dualism posits a strong connection between women and nature which has had significant impacts on the organization of science and technology today. The origins of this dualism vary considerably. Some believe that this dualism springs from Judeo-Christian thought (see Daly, 1973; Ruether, 1975). In Judeo-Christian scripture, Genesis in particular, God and Creation are juxtaposed. Human beings, who are made in the image of God, are awarded dominion over the rest of creation. God's status as a male, meant that such dominion was conferred not just generally on humanity, but on males in particular (Zimmerman, 1987: 26). Thus, the Genesis myth of Creation legitimizes the supposed "divine right" of men to dominate and exploit both nature and women (see Gray, 1981). Nature's sole value lies in its usefulness to "man" and as such must be controlled and repressed for human security and survival. Women must likewise be controlled and repressed in order to better serve man.

Carolyn Merchant believes that although the dualism may be rooted in Judeo-Christian thought, this in itself did not create the most significant divisions. In her book, The Death of Nature: Women, Ecology, and the Scientific Revolution (1980), Merchant (1980) argues that the view of nature as wild and uncontrollable was tempered by the identification of nature with a nurturing mother: kind, benevolent and providing for the needs of humanity. Both the negative and positive images of nature were identified with the female sex. The view of the benevolent female earth however, was undermined by the Scientific Revolution and the rise of a market-oriented culture. As a result of the Scientific Revolution, the world view became mechanized and rationalized while the view of nature as disorder "called forth an important modern idea, that of power over nature (1980: 2). Merchant believes that "re-conceptualizing reality as a machine rather than a living organism, sanctioned the domination of both nature and women" (1980: 2). This technological, mechanistic view of nature is closely linked to thinkers like Descartes who advocated an extremely mechanistic view of the world based on a subject-object dualism.

Normative dualism accepts a kind of thinking in which mind and body, spirit and flesh, culture and nature, men and women are separated, not into complementary halves, but into hierarchical opposites, with one half inferior. Normative dualism therefore "conceptually separates as opposite aspects of reality that in fact are inseparable or complementary...it opposes human to non-human, mind to body, self to other, reason to emotion" (1987: 6-7). Body, flesh, nature and women have been viewed historically as the degraded, inferior half of the dualism. Tracing the connection between the rise of this dualism and the rise of a mechanistic world view, based on scientific and mechanical advances and developing commercial interests, allows us to better understand the "mutual shaping of technology and gender relations" (Cockburn and Ormrod, 1993: 3).

This artificial world view led to our current understanding of scientific knowledge as objective, universal and transcendent (see Haraway, 1988; Harding, 1986 and 1991; Keller, 1985; Bleier, 1986). As a result of this understanding, there has been decreased reliance on experience. To problematize the dominant understanding of technology as objective and neutral, we need to start from our own experience, to "situate" our knowledge. In this way we can work towards an understanding of the interconnections between technology and social change. The downgrading of the lived experiences of people are part of the scientific and technological world which needs to be opened up to different kinds of experience before knowledge can be expanded. To quote Margaret Atwood (1983):

Try not to resist the third eye: it knows what it is doing. Leave it alone and it will show you that this truth is not the only truth (1983: 236).

My project in writing this chapter is threefold. First, I examine the evolving understanding that technology is both non-neutral and masculinist as a result of the material reality in which it is developed, distributed, and used. Second, using this critique of technology, I problematize the notion of "choice" in reproductive technologies in order to demonstrate how both the social context and the technologies themselves impact on such "choices." Third, I explore some of the biases in contraceptive research which demonstrate that choices about such technologies are constrained by the social and political context in which they are developed.

The Critique of Technology

While the Oxford dictionary defines technology as "the science of practical or industrial arts" (Oxford Dictionary), historians and social scientists define it more simply as the science of how to make things. Thus, technology includes things such as food production, shelter, and medicines but it also includes, of course, the modern technologies of spacecrafts and electronics (Faulkner and Arnold, 1985: 12). Modern technology, generally understood to be the only technology, has taken on a distinct definition in the capitalist system. That is, modern technology is seen as the "application of power machinery to production" (Heidegger in Krell, 1993: 308). Because production is viewed, historically, as progress, modern technologies have been hailed and accepted as "irresistible forces bringing unquestioned technical advantages and intrinsically containing seeds of economic and social progress" (Hetman, 1977: 2).

Despite the popularity of this understanding of technology, a consistent theme in the literature on technology in society is the need to put technology

in a social context (see for example, Franklin, 1990; Zimmerman, 1983; Stamp, 1989). Human creations, like Mary Shelley's *Frankenstein* (1818), are thought to take on an existence separate and independent from their creator. While this metaphor has interesting and useful implications, its danger lies in that it obscures an understanding that technology is essentially a human phenomenon which involves complex interactions with society. In his influential book, America by Design, David Noble (1977) argues that this kind of understanding is "artificially abstracted from the world in which people live" and thus "distorts both technology itself and the society which gives it meaning" (Noble, 1977: xviii). As he goes on to suggest:

Since those who comprise society are at the same time the human material of which technology is composed, technology must inescapably reflect the contours of that particular social order which has produced and sustained it...The development of technology, and thus the social development it implies, is as much determined by the breadth of vision that informs it, and the particular notions of social order to which it is bound, as by the mechanical relations between things and the physical laws of nature (1977: xxii).

It is perhaps incontrovertible that we live in a society which is sexist, racist and classist. As such, Cockburn (1988) has argued that technology has historically perpetuated these same structures. The perpetuation of economic inequalities is clearest since owning technology is an important source of economic power. As Cockburn suggests in her book, Machinery of Dominance, owning technology has been inseparable from wealth, and, thus, the place of technology and technological skills have played an important role in understanding class struggle in economic history. In short, "technology is a medium of power" (1988: 8).

While power clearly plays a role in technological development, there is, nevertheless, an important body of literature which stresses the liberatory nature of technological development. It is popularly believed that new technologies will liberate women from the drudgery of domestic life and the poor from their burdens. As Noble (1977) argues, Karl Marx was himself a proponent of this view of technology. While aware of the negative potential of technologies, he strongly believed that modern technology spelled the ultimate liberation of the masses. Marx viewed the relationship of technology and society as dialectical, with both technological and social change reinforcing the existing social order, while at the same time undermining it (1977, xix). He suggested in Grundrisse:

Forces of production and social relations -- two different sides of the development of the social individual -- appear to capital as mere means, and are merely means for it to produce on its limited foundation. In fact, however, they are the material conditions to blow this foundation sky-high (Marx, cited in Noble, 1977: xx).

Such liberatory potential is echoed by Thomas Kuhn (1970) in his ground breaking book, The Structures of Scientific Revolution. In this book, Kuhn, a theoretical physicist and philosopher of science, suggested that scientific revolutions alter the historical perspective of the community that experiences it and that since technology is a "readily accessible source of facts that could not have been casually discovered, technology has often played a vital role in the emergence of new sciences" (1970: 15).

However, as Donna Haraway (1991) reminds us, "social and scientific revolutions have not always been liberatory, even if they have been visionary" (1991: 194). In fact, it is not difficult to see how power would be perpetuated through technology, given the demographic reality of who

controls technology. The social differentials in power along the lines of gender, race and class have the potential to be reinforced, and, thus, further entrenched, with the advent of new technologies. It is, in fact, common sense to suppose "that technology, as a medium of power, will be developed and used in any system of dominance to further the interests of those at the top" (Cockburn, 1988: 8).⁵

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- ⁵ An example of race and class bias in technological packaging is the design and construction of the parkways of New York State. From the 1930s to the 1960s, Robert Moses was in charge of much of New York's public works. The bridges and underpasses over the Long Island Parkway to Jones Beach which were built at this time were specifically designed to be too low to allow public buses to pass under them. All those who travelled by bus, and were therefore poor or black or both, were barred from using and enjoying the parkland and "public amenities" through the design of these bridges (see Franklin, 1990: 71; Menzies, 1989: 59). Thus, it is easy to see technologies may only be liberatory if their creators have liberatory ideas.

This lack of liberatory potential is equally evident for women. As an illustration of this problem, Cynthia Cockburn (1986) examines the history of the compositor trade in printing presses. This case study demonstrates some of the many reasons that technology has not been liberatory for women. In part, the problem with technology is based on the way the body has been socially constructed. Cockburn argues that bodily difference, which is socially constructed, can be used to disadvantage women in the production of new technologies. Height and weight can be correlated to class as well as gender where boys are conditioned to be more physically effective than girls (1986: 97). While this in itself is a striking conclusion, a more important area of analysis is the "way in which a small physical difference in size, strength and reproductive function is developed into an increasing relative physical advantage to men and vastly multiplied by differential access to technology" (1986: 97).

Cockburn (1986) argues that compositors originally kept women out of the trade based on machines which were made so that the average man rather than the average woman could use them. In other words, differences in bodily size and strength can be put to political and economic advantage by defining certain tasks as requiring a certain size, thereby preventing women's entry (1986: 106). As Cockburn suggests,

Units of work (hay bales, cent sacks) are political in design. Thus the appropriation of bodily effectivity on the one hand and the design of machinery and processes on the other have often converged in such a way as to constitute men as capable and women as inadequate. Like other physical differences, gender difference in average bodily strength is not illusory, it is real. It does not necessarily matter, but it can be made to matter. Its manipulation is socio-political power play (1986: 106).

Even when the technology became more physically conducive to use by women, the fact that men dominated the unions ensured that these new technologies remained in the hands of men.

Certainly manufacturers and promoters of new technologies have made a point of stressing the liberatory nature of any new technology. This has been particularly true of technological innovations which are thought to liberate women. However, even technologies designed specifically to free women have been shown not to work to their advantage.

Technology, for example, is widely believed to have decreased the time spent performing household tasks. The change to clothes washing machines and dishwashers is seen as having had significant benefits for women, allowing them more free time to pursue other non-household tasks. The evidence, however, does not bear these assumptions out. Bose, Bereano and Arnold (1986) argue that these technologies were not liberatory for a number of reasons. First, due to increased standards around the cleanliness of the household, women today spend roughly the same amount of time on household tasks as our grandmothers did (see also Rothschild, 1983). Second, household work has reinforced the home system which keeps women economically marginal and socially isolated. Third, while technology could change the household specialization of labor, to divide tasks among members of the household, in practice, women still perform by far the majority of household tasks in most North American households.

These technologies have not released women to enter the paid labor force since, because the time saved is non-existent, those women who do paid work are forced to work a 'double-day'. Further, household technologies are not generally purchased in order to enable women to enter the paid work force but, rather, are purchased for reasons related to stage in the life cycle and economic means (1986: 176).

In attempting to understand *how* technologies are negatively linked to gender, race and class, many theorists apply the "use-abuse" model -- this

model suggests that technology itself is neutral, but that technology is put to use in society in ways which can be ethically considered "good" or "bad." However, this conception of the use of technology being wholly responsible for problems with technology allows scientists and technologists to avoid questions about the ethics of their work and further inflates the image of science as separated from the social world (Brighton Women & Science Group, 1980: 17). Faulkner and Arnold (1985) point out that it is important to "trace the origins of contemporary technology in order to understand how it has come to be more 'masculine' than previous technologies" (1985: 20). The dualism in Western culture, which I have outlined above, developed along with modern science and technology, and thus perpetuated a world view which accepts that control over nature through technology leads inevitably and progressively to material improvement (see Merchant, 1980). This world view also sees technology as the solution to all social problems. Recognizing that technology impacts on gender roles and women's lives in every way allows us to consider different approaches. In particular, recognizing how technology reflects social relations of power allows us to understand that things do not have to be the way they are.

Understanding technology as a social construct enmeshed in a particular society's history, which includes that society's "power plays" (Cockburn, 1988: 8) allows us to come to terms with technologies' lack of liberatory potential. Patricia Stamp (1989) suggests that while understanding this relationship we must,

...recognize that new technologies, arising from the political and economic needs of a particular era of development in a particular society, generate new forces of production and new social relations. In other words, technological artifacts are the raw material created out of historical experience, which, in turn, recreates society (1989: 1).

In other words, technological development can perpetuate the lowered status of certain groups of people on the basis of race, class and gender. As such, technological "fixes" to social problems cannot ensure that technology serves human needs and, indeed, can reinforce the social relations which produced the problem.

Reproductive technologies for women have, for example, been viewed as a technological "fix" for a variety of social problems, including, overpopulation (U.N., 1994), infertility (Corea, 1985), disease (Rothman, 1986), and women's inequality (Firestone, 1970). What many feminist analysts have begun to ask is just how women can benefit from technologies to either limit or increase fertility when those technologies are moving further and further from their control. When thinking about reproductive technologies, then, it is crucial to recognize that,

...despite the deeply ingrained Western cultural belief in science's intrinsic progressiveness, science today serves primarily regressive social tendencies; and that the social structure of science, many of its applications and technologies, its modes of defining research problems and designing experiments, its ways of constructing and conferring meaning are not only sexist but also racist, classist and culturally coercive (Harding, 1986: 9).

Reproductive Freedom and Reproductive Technology

Considering the problems with the status quo conception of technology gives us some context in which to view reproductive technologies.⁶

⁶ Technologies designed to intervene in human reproduction fall into four rough categories. The first deals with fertility control and includes contraception for both men and women and abortion. The second group of reproductive technologies is concerned with labour and childbirth. Technologies for monitoring and controlling the progress of labour and delivery include a variety of ways to take fetal heart rate, instruments to aid delivery, drugs and other methods to induce labour, episiotomies and, of course, cesarian section. A third area

Reproductive technologies, and particularly issues around contraception and abortion, have been conceptualized and fought for on the basis of a woman's "right to choose." In this section, I examine the problem with the notion of "choice" in the debates around access to reproductive technologies. While, as I argued earlier, reproductive technologies are best understood using the definition of reproductive freedom, even this definition needs to be expanded to incorporate the feminist critique of technology.

Feminist activists in the Western hemisphere were the first to utilize the notion of "choice" in their attempts to secure access to safe abortion for women. The "pro-choice" lobby proved to be a fairly effective strategy to mobilize activists around the issue of abortion. However, women of colour soon began to articulate their concerns about this notion of choice based on their own experiences in which they were often coerced into having abortions or sterilization (Rodriguez-Trias, 1982: 148) or did not have sufficient resources to "choose" to raise a family.

In talking about reproduction and control of fertility, then, it is important to start from the premise that these things must

...be understood as a historically determined, socially organized activity (separate from the activity of mothering), encompassing decisions about whether, when, under what conditions, and with whom to bear or avoid bearing children; the material/technological conditions of contraception, abortion, and childbirth; and the network of social and sexual relations in which those decisions and conditions exist. These relations include those between "providers" (doctors, family planners, population controllers) and "consumers" (women), between women and their male sexual and procreative partners, and between parents

are technologies known as prenatal testing. These include ultrasound, amniocentesis, and chorionic villi sampling to diagnose genetic defects. The fourth group of contraceptive technologies are directed at overcoming infertility. These include fertility drugs, in-vitro fertilization at various stages and surrogacy (Stanworth, 1990: 10-11)

and children. It is out of these relations, which are dynamic and historically changing, that women's consciousness develops and acts upon reproductive life (Petchesky, 1984, xi).

Using this starting point, has allowed many feminists to develop a conception of reproductive freedom which argues for women's control over whether, and in what circumstances, they bear and rear children (Jagger, 1983: 318). Reproductive freedom does not involve only access to contraception and abortion and freedom from involuntary sterilization. It also includes the availability to *all* people of child-care, schooling, housing, welfare, medical care and freedom from forced heterosexuality and reproduction (Jagger, 1983: 318). This notion of reproductive freedom goes beyond the limited notion of the "right to choose." What reproductive freedom "actually calls for is a transformation of the social conditions in which 'choices' are made...Because it cannot be achieved within the existing social order, reproductive freedom is, in fact, a revolutionary demand" (Jagger, 1983: 319).

"Choice" has historically meant that women, because they get pregnant, should have access to technologies which would give them control over their bodies. However, choices need to be understood as being constrained by more than just lack of access to a particular technology. There are two ways in which choices can be constrained. The first is the social and material conditions under which those technological choices are made. The second, related issue is how choices are constrained by the technologies themselves.

The social and material conditions under which "choices" are made are a critical area of socialist feminist analysis. Using a term like "choice" assumes that we live in a society where there are no serious divisions of power and authority (Corea, 1985: 3). But having a "right to choose" a reproductive

technology means little when women have limited power. For example, Petchesky (1984) discusses how in the late 1970s four female employees at an American Cyanamid chemical plant in West Virginia were given the "choice" of being sterilized or losing their jobs. Despite the fact that the substances to which they were exposed were also dangerous to male reproductive functions and, of course, to the workers themselves, and even though the women were not planning to become pregnant, these women were told that in order to keep their jobs, they needed to be sterilized. While the decision of the women was "voluntary" in the narrowest sense, this incident brings to light the material and political constraints under which such decisions are reached.⁷ Under these conditions it seems problematic to talk about the sterilizations as a choice that was freely made.

Calling sterilization a choice for many Third World women is equally misleading. While women the world over want family planning, they want it in the context of a wide choice of methods, in the context of primary health services, adequate screening and follow up. However, in many Third World countries, where there is a heavy emphasis on reducing the population, sterilization is the only contraceptive available to women. Further, family planning workers are often expected to meet "targets" whereby they must have a specific number of women accepting sterilization or face penalties (see Chapter 4). When this is coupled with incentives, such as clothes, money or food, given in exchange for sterilization, the voluntary nature of such a method is questionable. As Betsy Hartmann (1987) suggests,

⁷ Some of those constraints included: "women's need to work outside the home and the difficulty working-class women face in securing relatively well-paid jobs; the danger of miscarriage or pregnancies that might issue in deformed children; the refusal of the company, later backed up by the courts, to take responsibility for either transferring the women to safe jobs with equal pay or cleaning up the toxic substances; the unwillingness of many labour unions to fight around such issues" (Petchesky, 1981: 50)

For people who are desperately poor, there is no such thing as a free choice. A starving person is unlikely to turn down a loaf of bread, even if it means being sterilized. Thus, in practice incentives often have more to do with coercion than with choice (1987: 66).

Barbara Katz Rothman (1986) in her study of women undergoing prenatal testing, entitled The Tentative Pregnancy, argues that it is only those people whose choices meet social expectations, who want what society wants them to want, who can be seen as having real choices. Those who do not want what a technology brings, face the alternative of closed options. New technologies such as prenatal diagnosis and conceptive technologies may offer new choices, but they also create new structures and new limitations on choice. As Rothman suggests:

The social structure creates needs -- the needs for women to be mothers, the needs for small families, the needs for 'perfect children' -- and creates the technology that enables people to make the needed choices. The question is not whether choices are constructed, but how they are constructed. Society, in its ultimate meaning, may be nothing more and nothing less than the structuring of choices (1986: 14).

Many feminist authors (Gallagher, 1987; Stone, 1991) have objected to the kind of argument Rothman is making because of its stress on the way women's choices are constrained and controlled by male dominated institutions and pressures. They argue that it is more important to "focus on women as social actors, constructing their lives in response to a range of opportunities and restraints" (Stone, 1991: 313). Feminist critics of new reproductive technologies, for example, have suggested that women's choice to participate in infertility treatments is so conditioned by the stigma of infertility and societal norms of motherhood as to be no choice at all. These authors have portrayed women as "at the mercy of technologies developed by

men who see women as something 'other', strange, not-the-norm" (Arditti, et al, 1984: 2). Janet Gallagher (1987), however, believes that such arguments are unhelpful because they define women as victims. Defining women in this way undermines women's capacity to make choices even within the acknowledged limits of the social context.

Certainly, it is important to see that women make their own reproductive decisions. However, they do not necessarily make them under conditions which they control. Rather, women make decisions in a society in which, as individuals, they may be unable to control or change. As Rosalind Petchesky (1984) states:

That individuals do not determine the social framework in which they act does not nullify their choices nor their moral capacity to make them. It only suggests that we have to focus less on "choice" and more on how to transform the social conditions of choosing, working and reproducing (1984: 11).

While I wholeheartedly agree with this conclusion, I feel it is important not to lose sight of the earlier critique of technology. The above conclusions, of Gallagher (1987), Stone (1991) and Petchesky (1984), imply that it is not the technologies themselves which are bad, but the social situation in which they are used. However, it is important to avoid seeing technology as neutral and only its use in particular social contexts as negative. The impact of material and social realities on how particular technologies are used are indeed issues which must be examined. It is equally important however to understand how society affects choices in the creation of a particular technology.

Rothman (1986), for example, argues that not only will women be unable to avoid prenatal testing in the future, but prenatal testing will

constrain further technological developments. In other words, technologies will have systemic discrimination built into them which will strongly determine the direction of further technological developments as well as the choices around their applications. Rothman points out that prenatal technologies may prevent researchers from attempting to find a cure for a number of diseases. Fetuses which have diseases which can be uncovered through prenatal diagnosis are aborted, and thus, those diseases are no longer seen as a problem. For example, in the 1960s and 1970s, there were three times as many people working on research into Tay Sachs disease funded by the National Institute of Health and by the Tay Sachs foundation than since the advent of prenatal testing (Rothman, 1986: 230). Curing Tay Sachs is no longer a priority since these babies can be prenatally diagnosed and aborted. Those who will still give birth to children with diseases detectable by diagnosis will be women without access to prenatal care, mainly, the poor. Thus, as Heather Menzies (1989) suggests, the idea that choices in particular technological decisions are neutral is a faulty vision of the notion of choice. That we have come to use particular technologies in particular ways, no matter how biased, is seen as the "normal" and "rational" way. "There is no sense of choices that were excluded or unexplored, and it's just as hard sifting out the 'crucial' choices that did contribute to the final technological system" (Menzies, 1989: 55).

Jagger (1983) may be correct in suggesting that, because reproductive freedom has been "subject to constraints which are simultaneously social and technological," therefore "sexual and procreative freedom requires developments in both technology and social organization" (Jagger, 1983: 305). However, what she does not appear to accept is that it may not be possible to develop appropriate technologies without first or, at least, simultaneously

changing the social conditions in which they are created. The impact of the social context on the creation of reproductive technologies is highlighted in the following section in which I examine the research biases present in contraceptive research programmes.

Contraceptive Research Biases

Contraceptive technology provides an example of technologies which are designed to be a technical "fix" to social problems.⁸ As a result of the rationale behind its development, the technology itself is problem-laden. While there are many problems with the delivery and application of contraceptives in the Third World, many of the social contexts which create these problems are reflected in the contraceptive technologies themselves.

Betsy Hartmann (1987) has identified three basic biases in the research around contraceptive technologies which have led to the development of technologies which are inappropriate to the needs of users, mainly women. The first and most obvious problem is the sexist bias which dictates for whom contraceptive technologies are developed. Research on contraceptives has focused overwhelmingly on the female reproductive system. It is predominantly men who have dominated the research field for contraceptives and many of them hold the view, like the rest of society, that reproduction is basically the concern of women (1987: 167).

⁸ For example, while the technical understanding about hormonal contraceptives existed by the late 1930s it was not developed until the late 1950s, as a result of pro-natalist policies and popular morality. The sudden fear of world population explosion paved the way for legitimate work on the Pill (Wajcman, 1994: 170).

The second bias is that recent contraceptive research has focused mainly on systemic and surgical forms of birth control,⁹ which are long-acting and provider-controlled, rather than on developing safer barrier methods which are intercourse-related and controlled by the user. The tendency of the newer, complex contraceptive technologies is to make women more dependent upon medical personnel. Hormonal, immunological and surgical methods of birth control have received the majority of total public expenditures for the development of new contraceptives.(Hartmann, 1995: 179). These methods are being developed particularly for their use in population control programs in the Third World. However, as Kabeer (1992) suggests, "the promotion of forms of contraception which remove reproductive control from women (sterilization, injectables, implants, etc.) do little to reassure the population that the interests of the users have shaped the provision of services" (Kabeer, 1992: 15). Women's health advocates warn that it is these kinds of methods especially which carry the potential for abuse in the context of Third World population control policies. These fears are not unfounded since in a four-country clinical trial of Norplant in 1990 it was noted that "(in) all four countries there were reports that removal on demand did not occur to the satisfaction of the user" (Hardon, 1992: 762). The pharmaceutical industry concentrates on these methods partly because they are more profitable than barrier and natural methods and partly because medical research funds tend to be channeled into methods which are more sophisticated and which, therefore, will win them more recognition and prestige (Hartmann, 1987: 168).

⁹ This includes the pill, injectables, implants, vaccines, IUDs and sterilization.

The third bias, which is linked to the previous two, is that there has been much greater emphasis on the efficacy of contraceptives rather than on their safety. It is particularly the profit interest of the pharmaceutical industry which adds a strong bias towards effectiveness in reaching population targets rather than reproductive safety and choice for those using birth control methods. There are strong connections between aid-giving institutions and pharmaceutical companies which produce contraceptives. These connections are particularly strong in the U.S. where the pharmaceutical companies are effective government lobbyists. Population control programs represent an important market for a number of pharmaceutical companies. Further, public institutions working on population control (such as the Population Council and the World Health Organization) benefit from their connection with the pharmaceutical industry because they do not have the industrial capacity to manufacture products themselves. In order to maintain this profitable alliance, industry officials lobby congress on the need for population control aid while also providing significant donations to support population control organizations.¹⁰

From 1965 to 1985 a study in worldwide trends in funding for contraceptive research showed that less than ten percent of total expenditures on reproductive research and contraceptive development were devoted to safety (Atkinson, et al, 1985: 198; Hartmann, 1995: 180). Further, those expenditures on safety are concentrated in developed countries which have the financial ability to test new contraceptives for safety and where consumer

¹⁰ Gena Corea (1980) also suggests that there is evidence of aid officials being bribed by the drug companies. "In papers filed with the Securities and Exchange Commission, Upjohn admitted giving more than four million dollars in payments to government officials in foreign countries and to the employees of foreign health care services in order to secure sales. ." (1980: 130).

and women's groups pressure for regulation of new contraceptives. In the United States, the Food and Drug Administration is the main body which regulates safety of contraceptive devices. A positive decision by the FDA is often used by governments in many Third World countries as an indication to go ahead with a particular contraceptive. While the FDA is an important mechanism for protecting the safety of users, it is not without its problems. Pressure from the pharmaceutical industry often weakens FDA guidelines¹¹ and drug safety tests done by the pharmaceutical companies themselves may not be reliable indicators of safety.¹²

As discussed in Chapter 4, comparisons between maternal mortality and risk of contraception are unfounded. Accepting contraceptive risk is a personal as well as a scientific decision (Hartmann, 1987: 174). While women may well be willing to take risks to avert pregnancy, they have the right to know all the risks and make those decisions for themselves. However, contraceptive manufacturers in conjunction with population control advocates are making those decisions for women. As Hartmann (1987) suggests, it is the influence of the population establishment, the pharmaceutical industry and the scientific community which affect contraceptive development rather than individual users of contraceptives (1987: 174). As a result, the technology reflects the biases of the creators rather than the needs of the users. Female contraceptive methods are given more priority than male methods, natural and barrier methods take a far second

¹¹ For example, Hartmann (1987) documents a case where fourteen FDA employees brought charges against the agency. The employees claimed that because of industry pressure, they were removed from positions where they were either holding up the approval of a drug or recommending cautionary labelling (1987, 169).

¹² The pharmaceutical company G.D. Searle, for example, consistently faked results of drug safety tests, including removal of a tumor from a test dog in a study of the oral contraceptive Ovulen (Hartmann, 1987, 169).

place to systemic and surgical forms, and safety is not a primary concern (1987: 175).

Conclusion

Some feminists are attempting to re-analyze reproductive technologies using some of the knowledge gained in the feminist critiques of science and technology. Their purpose is to avoid the technological discourse of neutrality which distorts the reality of women's experience. These feminists are endeavouring to ground their critiques of reproductive technologies in the lived experience of women since it is perceptions of how these technologies affect the physical, social and emotional life of women which expands knowledge of them. In order to understand how contraceptive technologies have developed, we need to turn to our bodies. Heather Menzies (1989) highlights this point when she suggests that we need to,

...inform ourselves by listening with our own ears and seeing with our own eyes... Personal experience gives us a knowledge of the social as context, the embodied reality of what values, relationships and institutions are being displaced through technology, and of what other agendas serving what other social priorities are being dropped. We can use this to criticize the expert's agenda for creating a technologically governed social environment... Without it and without the enabling leverage of another way of knowing to give it credibility, we are trapped within technology's own logic orbit, and cannot judge the "costs and benefits" of technological change against a larger backdrop of the personal and social environment (Menzies, 1989: xiii).

By using personal experience to understand the development of contraceptive technologies, by situating our knowledge about them, we can step outside of the logic offered by the medical establishment, the pharmaceutical industry and the population control establishment. Allowing personal stories to set technology in its social context will permit us to reclaim

the issues. Only by making use of our "third eye" can we discover an alternative model for understanding reproductive freedom.

In the next chapter, I attempt to understand the social context in which contraceptive technologies are developed. In particular, I argue that it has been the discourse of population control which has had the greatest impact on decisions regarding the development of new reproductive technologies, particularly contraceptive technologies. Contraceptive technology is seen as the solution, to "over-population," a problem which, in turn, has been constructed as a major international "crisis" and located as a Southern problem to which the solution lies in a technological "fix" provided by the North.

Chapter 3

Setting the Context: Population Control Discourse

Introduction

In order to further understand the effects which the discourse on population has had on the research and development of contraceptive technology, it is necessary to first examine the discourse itself. The ideology of population control has grown out of the belief that "overpopulation" creates problems that require international solutions. This belief rests, historically, on the perceived negative effect of population growth on economic development, and more recently, on concerns about the environmental impact of population growth. While many individuals and organizations advocate the position that over-population is the major problem for development and see the solution as the distribution of modern contraceptives, there are also challenging voices which argue that this position is both inappropriate and incorrect. In this chapter, I trace the discourse around population. I examine the ways in which the dominant discourse has been able to adapt to the challenges posed by those resisting the population control paradigm and, despite many changes in rationale, retain the dominant themes that over-population is a major international crisis and that the technological "fix" of family planning is the best solution to this crisis.

This chapter is organized into three parts. In the first part, I explore the importance of discourse analysis, with particular emphasis on the connection between dominant discourse and the resistance to it. The second part traces the population discourse to show some of the major themes which have emerged and which cohere the debate around population. Finally, in the third section, I examine how the most recent challenges to the dominant discourse, originating mainly in the women's health movement and the environmental movement, have been incorporated into the dominant discourse. Thus, what began as a reverse discourse has been transformed into a normalizing discourse with the result that the discourse around population control has not significantly altered.

The Importance of Discourse

Michel Foucault, who contributed to both contemporary social criticism and to feminist theory by his explanation of the relationship between power and knowledge, suggested that it is possible to analyze relations of power and resistance based on "the premise that relations of power and knowledge are articulated through discourse" (Foucault 1978: 101). Foucault defined discourse as the site at which power relations are determined. Fiona Mackenzie (1992) suggests that discourse can be defined as "the struggle, or the negotiation, over meaning" (1992: 693). It is the ability to control knowledge and meaning -- through writing, social relations and disciplinary and professional institutions -- which is the key to understanding the power relations which influence which discourse will be dominant (Parpart, 1991: 2).

Diamond and Quinby (1988) attempt to demonstrate how dominant discourses represent power, in particular the "disciplinary systems and prescriptive technologies through which power operates in the modern era" (1988: xi). An example of this analysis is seen in Foucault's work on sexuality which is "not so much a history of sexuality, in the traditional sense, as it is a history of the discourses on sexuality and the body" (Johnston, 1994: 3). In other words, it is about what is normal and what is not, and the ways in which these discourses have maintained hierarchical relations in modern Western civilization. This analysis has been important for two reasons. First, it has had important implications for understanding the relationship between women and the body. Second, it makes clear how using discourse analysis can clarify power structures in society.

Foucault conceived of power "not as property, but as a strategy" (Foucault 1979, 26 cited in Stamp, 1989: 130). In other words, power cannot be exercised in a monolithic way, where some have it and some do not. Moreover, it is essential to understand that knowledge cannot exist apart from relationships of power (Stamp, 1989: 130).

We should admit that power produces knowledge...; that power and knowledge directly imply one another; that there is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations...In short, it is not the activity of the subject of knowledge that produces a corpus of knowledge, useful or resistant to power, but power-knowledge, that processes struggles that traverse it and of which it is made up, that determines the forms and possible domains of knowledge (Foucault 1979: 27-28, cited in Stamp, 1989: 130).

Thus, while domination may be understood as the exercising of power, power is not total or centralized. If power were absolute or completely controllable, it would be impossible to analyze and understand it because

there would be no frame of reference in which to "see" power. In discussing ideology and discourse, McDonnell (1986) demonstrates "that no practice or discourse exists in itself: on whatever side, it is ultimately shaped and 'preceded' by what it is opposing, and so can never simply dictate its own terms" (1986: 52). Thus, it only through *resistance* that power can be understood.

Since it is at the level of discourse that power is produced, transmitted and reinforced, discourse is also, therefore, the site at which dominant paradigms can be challenged or undermined. Irene Diamond and Lee Quinby (1988) articulate a notion of resistance based on a convergence of feminist and Foucauldian analysis. They suggest, in particular, that the "crucial role of discourse (is) in its capacity to produce and sustain hegemonic power" and that it is the "marginalized and/or unrecognized discourses" which present the greatest challenge to dominant discourses (1988, x). They further suggest that such resistance, like power, is not focused exclusively on a centralized power, like the state, but may be generated in local and intimate operations of power. Discourse analysis, then, investigates the politics of language and knowledge to uncover the "open-texturedness of reality...multiple stand-points, multiple truths, multiple sites of power/knowledge, and, by extension, resistance" (Eisenstein, 1988: 10-11).

The concept of investigating the dominant discourse through the viewpoint of marginalized realities owes much to a number of feminist scholars, including Hartsock (1987), Haraway (1986, 1991), Smith (1987), and Harding (1991, 1993). These scholars, and others, have developed standpoint theories which claim that one's location has consequences for what is known. A uniquely feminist standpoint involves thinking from the standpoint of women's lives "as they are shaped by material conditions and ideological

frameworks that give rise to particular activities, interests and motivations" (Harding, 1991: 5). As such, these theorists claim that examining the lives of women who have been marginalized "provides fresh and more critical questions about how the social order works than does starting off from the unexamined lives of members of dominant groups" (Harding, 1993: 62).

Sandra Harding (1993), one of the foremost standpoint theorists, makes clear that, while feminist knowledge starts from women's lives, there is no typical or essential woman's life from which feminisms start their thought. In fact, she argues that thought which starts off from the different and even opposed lives of women "can generate less partial and distorted accounts of nature and social life...the logic of the directive to 'start thought from women's lives' requires that one start one's thought from multiple lives that are in many ways in conflict with each other, each of which itself has multiple and contradictory commitments" (Harding, 1993:). While difference is crucial to understanding how social meanings are constructed, one must not lose sight of the fact that any knowledge is directly influenced by the material conditions and discursive practices within a particular historical moment.

Thus, marginalized or "subjugated" knowledge is critical because it reveals the knowledge of those who are less powerful in relation to the dominant discourse. In order to understand a particular discourse, then, it is necessary to "reconstruct the knowledges or 'reverse discourses' that have been marginalized" (Mackenzie, 1992: 695). As such, dismantling systems of domination which are embedded in discourse, requires an analysis of the discourse "of the dominant class or gender and the simultaneous creation of discourses of opposition" (Mackenzie, 1992: 695).

In terms of discourse around population, it is important to understand what the dominant discourse is, as well as how it has been influenced and changed by discourses of resistance. The strongest challenges to the dominant discourse have come from those who have attempted to reveal the contradictions between the dominant discourse around population and the lived experiences of women who have been affected by population control. In the next two sections, I argue that despite shifts in the dominant discourse which appear to take into account alternative discourses, these changes have, in fact, been of a superficial nature only. As a result, the power structures and the underlying discourse have remained dominant. This underlying discourse rests on the notion of population growth as a significant problem of our time and sees the solution to that problem as population control.

The Changing Face of Population Control Discourse

The defining principle of population control discourse has remained consistent: that population control is a major problem for international development and that the solution to this problem is the distribution of modern contraceptives. In the following section, I map out the key concepts around which this paradigm has been organized. These concepts have shifted as challenges have been made to the dominant discourse. Despite these changes in emphasis, the underlying principle of the dominant discourse around population control has remained constant.

By tracing the historical changes in the discourse around population, it is possible to understand the interconnections between each phase in the debate. The connection between international development and population growth has been based on the rationale that economic growth is curtailed, and

that environmental degradation is accelerated, as a result of population growth. Critics, largely in the South, who resist both these rationales suggest that underdevelopment in the South and over-consumption in the North, and not overpopulation, are the problems. Further, women's groups internationally have resisted the dominant paradigm, arguing that women are being denied reproductive freedom as a result of population control policies. The newest manifestation of the dominant discourse, the notion of "synergy," has successfully incorporated these challenges to the dominant discourse, without fundamentally changing the underlying paradigm. In this section, I examine in more detail these shifts in the discourse.

Economic Growth Model

From the late 1940s until the 1980s, there were unprecedented rates of population growth in developing countries, which increasingly attracted the attention of demographers and policy makers. The broad outline of the theory of demographic transition had already been established by the late 1940s (Kirk, 1944; Notestein, 1945). This theory posits that when there is a decline in the death rate (due to medical advances, better sanitation etc.) the birth rate will remain the same for a short time and then will adjust with people having fewer children. This theory was developed based on the experience of fertility decline in Europe at the end of the 18th and beginning of the 19th century. In developing countries, while there is still debate on the issue, the larger number of women in fertile years combined with the dramatic changes in mortality rates led to the high rates of population growth (Caldwell, 1994: 9). The trend was the same on all continents. In Asia for example, the most dramatic increase in population was in China where, between 1950 and 1980,

the population increased by 82 per cent, going from an estimated 547 million to more than one billion. Remarkable increases were also occurring in Latin America. In Mexico, for example, the population increased two and a half times in the same time period going from 27 to 68 million. In Africa, the population of Nigeria went from 33 to 77 million (Donaldson, 1990: 4). Such rapid increases in population led to theories about the economic effects of such a rise in birthrates.

The belief that the rapid population growth which was occurring was detrimental to economic growth gained widespread acceptance in the 1950s and 1960s (UNFPA, 1993: 2). In their extremely influential study, Population Growth and Economic Development in Low Income Countries, Coale and Hoover (1958) used a macro-economic growth model to answer the question: "What difference would it make in economic terms if the birth rate, instead of remaining unchanged should be cut drastically in this generation?" The authors concluded that:

- At any stage in the foreseeable future of the low-income countries with high fertility, a reduction in fertility would produce important economic advantages. Since these advantages are cumulative, the ultimate benefits of fertility reduction are greater, the sooner it occurs (1958: 335).

The strength of studies such as that by Coale and Hoover led to an effective agreement within the population establishment that population growth negatively affects *per capita* growth. This popular understanding of the population problem is originally attributed to Thomas Malthus (1766-1834), an economist, whose "Essay on the Principle of Population" tried to prove that the poor would remain poor since their needs would continually "outnumber" the resources of society. He wrote: "Population when

The rationale of economic development is used to this day to defend population control policies. However, critics argue that this belief is misguided and cannot be the basis for family planning programmes. New research, along with changes in research methodologies, produced an analysis which substantially revised and downgraded the role of population growth in economic development. This challenge to the discourse around economic development focused on the notion that it was not the supply of contraceptives which needed to increase, but demand for them. Further, it was argued, the only way to increase demand for contraceptives was through development itself.

The Development Model

As a result of the growing concern with the "population problem" in the early 1970s, the first intergovernmental World Population Conference was held under the auspices of the United Nations in Bucharest, Romania in 1974. The two previous United Nations Population Conferences had involved scientists in their personal capacity, but the 1974 Bucharest Conference was the first to include government representatives in their official capacity. At the Bucharest Conference, the United States government, along with other developed nations, stressed the importance of family planning and the setting of national goals for reductions in population growth (Weinberger, 1974). Throughout the late 1960s and early 1970s, the US worked hard behind the scenes to stimulate movement in the area of population control (Donaldson, 1990: 121) including increased funding for contraceptive research and delivery.¹³ The US was clearly successful in their

¹³ The ideology of population control was also quite prevalent in the domestic life of the average American citizen. Jacqueline Kasun (1988) documents how public school media campaigns, which were run in the mid-1970s by federally funded institutions, indoctrinated

of people in the Third World encourages them to ignore the natural limits of their environment and to over-populate their countries.

The perception of new opportunity, whether due to technological advance, expanded trade, political change, foreign aid, moving to a richer land, or the disappearance of competitors (who move away or die), encourages larger family size. Families eagerly fill any apparently larger niche, and the extra births and consequent population growth often overshoot actual opportunity (1994: 85-86).

This argument, that improved economic situations lead to high fertility, is made despite years of research on fertility trends which indicates the opposite (see for example Caldwell and Caldwell, 1982). Nevertheless, this extreme view is still popularized in media or recast in a softer light which pits people against resources.

A significant amount of research has questioned the notion that there is a direct correlation between economic output and population size, growth, or density. For example, one of the world's most prominent economic demographers, Colin Clark of Oxford University, has argued that there is a lack of empirical evidence that population growth hinders economic development. He has noted that the empirical evidence shows a positive relationship between population growth and the growth in *per capita* income (see Clark, 1970 and 1972). Ester Boserup, a Danish economist, has suggested that population growth, rather than being a hindrance to economic growth, is actually a prerequisite for agricultural development. Her theory can be summed up in the phrase, "necessity is the mother of invention" since population growth serves to stimulate agricultural intensification and technological improvements (see Boserup, 1965). Julian Simon, probably the most famous proponent of this view, argues that growing populations

actually stimulate higher productivity and should therefore be encouraged (see Simon, 1981).

While this research is important in understanding that connections between economic growth and population are not as simple as has been suggested, some of the more extreme manifestations of this position, particularly those coming from Julian Simon, can be rejected on two grounds. First, the arguments are based on the notion that the impact of population growth can be judged solely by its effect on human beings, while ignoring any responsibility toward the rest of the natural world. Further, the presumption that population growth is not a problem because of infinite human ingenuity also ignores the fact that the natural world is an interacting system and that efforts to support ever larger numbers may destroy delicate ecosystems (Lappe and Shurman, 1988: 9).

It is possible to reject the arguments of Simon and others and still not agree with the views advocated by Ehrlich and Hardin, and *vice versa*, mainly because both extremes of the argument lack any analysis of political power within the debate. While analysts of the former view fail to consider either the natural ecosystem or the differential impact of its loss on people, the other side ignores the many other factors beyond sheer numbers which shape people's ability to support themselves. For instance, both sides completely ignore issues of differential control over land and resources. Underlying all of these issues is who has power in society and who does not. Lappé and Shurman (1988) analyze power structures in society, describing this factor as the "missing piece of the population puzzle" (1988:1) In particular, they stress that

...the impact on fertility of women's subordination to men, a condition that contributes to the social pressure for many births. But it places this problem within the context of unjust economic structures that deny people realistic alternatives to unlimited reproduction. Within such a framework, rapid population growth is seen to result largely from efforts by the poor to cope, given their powerlessness in the face of the concentrated economic strength of an elite....Thus, the narrowly constricted power of Third World women can only be understood in light of relationships extending far beyond the family and even the community...From the level of international trade and finance, down to jobs and income available to men as well as women, antidemocratic structures of decision making set limits on people's choices which ultimately influence their reproductive options (1988: 30).

Despite the impact which differential access to power has on high fertility and the fact that the state of scientific judgement regarding the economic consequences of population change is still unsettled, the notion that rapid population growth creates strong barriers to economic development persists (Sadik, 1990; UNFPA, 1995b). This belief has been the impetus for involving international development agencies in the area of population control. Enke (1969), a researcher with General Electric, conducted a study in which he used a cost benefit model in order to show that the economic returns on investment in family planning were extremely favourable. He claimed that resources spent on family planning could contribute up to 100 times more to higher *per capita* income than could resources invested in production (Enke, 1969 and 1971). While the data used for the study were hypothetical, the study provided the basis for a much cited speech by President Lyndon Johnson in which he argued that \$5.00 worth of birth control was worth \$100.00 of economic development (Mass, 1976: 99). Thus, the General Electric study became an influential document, ensuring that family planning would continue to be seen as the key to economic development (Hartmann, 1987: 102; Knowles 1993: 2).

The rationale of economic development is used to this day to defend population control policies. However, critics argue that this belief is misguided and cannot be the basis for family planning programmes. New research, along with changes in research methodologies, produced an analysis which substantially revised and downgraded the role of population growth in economic development. This challenge to the discourse around economic development focused on the notion that it was not the supply of contraceptives which needed to increase, but demand for them. Further, it was argued, the only way to increase demand for contraceptives was through development itself.

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push to increase contraceptive services in developing countries. In 1965, USAID's total assistance for population programs had been \$2.1 million. It grew to \$125.6 million in 1973 (USAID, 1974).

Demographers, particularly American demographers, offered a straightforward definition of the population problem to leaders in developing countries. Population was a problem because countries with high birth rates would have difficulties creating enough employment, providing sufficient education and health services, raising per capita income, and attaining other levels of economic modernization. The solution offered was to lower the birth rate through family planning programs using modern methods of contraception. This view became a form of intellectual orthodoxy (Warwick 1991: 21) both in the United States and in the UN-sponsored population conferences held in Rome in 1955 and Belgrade in 1965, remaining unchallenged until the 1974 Bucharest World Population Conference.

At the Bucharest Conference it was successfully argued by a number of Third World and socialist governments that the emphasis on population control through family planning served to mask the underlying inequalities in the international economic order. The representatives of these countries pointed out that the widespread decline in fertility in the developed nations came as a result of their economic and social development. Building on the research of anthropologists, sociologists and economists who had begun to ask why population in developing countries grows so fast, the Southern country representatives pointed to the complex interaction of social and cultural forces which keep Third World fertility high, including high infant mortality, lack of old age security and low status of women (Lappe and

a generation of children that overpopulation would lead to starvation, cannibalism, civil violence, and nuclear war (1988: 21).

Schurman, 1988: 13). Thus, the Chinese declared that "population is not a problem under socialism" and the statement by the Indian delegates that "development is the best contraception," became the popular slogan of the conference.

Despite the commitment to their position by the US delegation, the Bucharest Conference, surprisingly, was not "...led, kept in motion, directed, and controlled by the United States..." (Demeny 1985: 99). At the conference, the World Population Plan of Action (WPPA) was adopted which reflected the concerns of the developing nations at the conference by emphasizing that population issues were to be part of the broader development agenda and, as such, family planning could not substitute for development. The recommendations of the WPPA tackled issues such as "population growth, morbidity and mortality, status of women, population distribution, internal and international migration, data collection and analysis and implementation" (Warick, 1985: 7). Of particular interest, the WPPA specifically recognized the right of couples and individuals to decide freely and responsibly the number and spacing of their children and to have access to the information, education and means to do so (Salas, 1985: 22-24).

Though voices from the South were heard powerfully in the final document, the American State Department nevertheless claimed that "...despite opposition from many LDCs and Communist countries to certain provisions, we believe all basic U.S. objectives were achieved and there were many accomplishments" (cited in Donaldson, 1990: 127). The belief that the WPPA was a valuable document for the population control advocates has proven true. A recent UNFPA document discusses the importance of the WPPA by suggesting that it placed "population and development issues on the international agenda as a major issue of our time" (UNFPA, 1994b: 4). In

other words, while at the Bucharest Conference greater attention began to be paid to the underlying social context which led to high fertility rates, the notion that population was the problem for development had held sway, thus allowing the family planning solution to prevail. Without the new, revised, connection to the field of "development," the population discourse might easily have been sidelined .

Persistence of the Family Planning Model

In spite of the doubts about family planning as the solution to population growth expressed by developing countries in Bucharest, there was growing support for family planning over the 10 years between Bucharest and the next World Population Conference held in Mexico City in 1984 (Donaldson, 1990:128). Even those countries which had been strong opponents of the US at Bucharest within a few years began to support government provision of contraceptives. In particular, China and India, both of whom had been vocal adversaries of the US position at Bucharest, became more open to the idea that the provision of contraceptives by government was necessary for the modernization path to development.¹⁴

Despite China's argument at Bucharest that socialism would take care of the population, the desire to improve the economic situation in China led

¹⁴ Modernization theory is a linear theory of development based on the notion that the best path to development is to emulate Western, modern industrialization while rejecting traditional ways of life. As Higgot suggests, "advanced industrial Western society was established as the good society to which the colonial peoples could be steered by a process of guidance and diffusion" (Higgot, 1984 16). This dichotomy is built on the assumption that the move from traditional to modern society is nothing more than a technical process. Thus, economic development simply requires the industrialization of those sectors of the economy which retain traditional ways. Such an emphasis on modernization has led to numerous problems, particularly in its bias against traditional agricultural production. Modernization theory has, thus, been criticized for its linearity which has failed to take account of the dislocations which have resulted from the implementation of this theory.

to the implementation in 1976 of the one-child policy. China's Prime Minister Zhao Ziyang was quoted as saying in 1980,

Stimulating production and improving the people's living standards both require that we continue to lay special stress on population control. This is our national policy, a policy of fundamental strategic importance. We must persistently advocate late marriage and one child per couple, strictly control second births, prevent additional births by all means [and] earnestly carry out effective birth control measures (cited in Demeny, 1984:100).

The policy, which includes fines for unauthorized children, led to increased cases of female infanticide, forced abortions and sterilization, eugenics policies, and repressive monitoring and incentive and disincentive schemes (Hartmann, 1987: 150-54). The policy also created negative effects on women's power within families and communities, particularly in rural areas by, for example, increasing economic pressure on older rural women to be more productive and on girls to leave school early in order to do agricultural labour (Dalsimer and Nisonoff, 1987: 592).

India, the country which coined the slogan "development is the best contraceptive" also underwent a change in policy. A formal statement of the government of India in 1976 claimed that:

If the future of the nation is to be secured...the population problem will have to be treated as a top national priority...To wait for education and economic development to bring about a drop in fertility is not a practical solution...We are of the view that where a state legislature, in the exercise of its own powers, decides that the time is ripe and it is necessary to pass legislation for compulsory sterilization, it may do so (cited in Demeny, 1984: 100).

During the six months from July through December 1976 over six million people were sterilized in India. The "emergency" of 1975-76 under the late

Prime Minister Indira Ghandi led the central government to put pressure on family planning workers to meet sterilization quotas. In some instances, police raids were used to round up 'eligible' men for forcible sterilization (Warwick, 1982: 8). Development as a contraceptive had given way to coercive measures in an effort to speed up demand for contraceptive technology.

Thus, after the Bucharest Conference, many developing countries seemed to be adopting the US policy prescriptions. This reversal in government policy in developing countries has led to speculation that the negative reaction to the US position at Bucharest was more a result of the *presentation* of the US position than of the position itself. In other words, the reaction of Southern countries at Bucharest to the US position may have resulted from frustration with the US, which, while willing to talk about population control, was not willing to deal with issues of relative economic wealth and development assistance. It is equally possible, however, that the amount of money being poured into population control programs by the US and other donor agencies at that time effected a gain in adherents for the ideology of population control through family planning. Such incentives are particularly attractive to elites in Third World governments who also stand to gain by pursuing population control programmes as a policy objective rather than dealing with issues of poverty and equity.

At any rate, given the support by developing countries for family planning in the years after Bucharest, the Population Conference in Mexico City should have been more amenable to the American view. By 1984, there was general acceptance both of the notion that population reduction was necessary for economic development and of the proposed solution to that problem, namely contraceptive distribution. However, the political climate in the US had changed with the election of the Reagan government. The rise of

the right and "pro-life" factions led to a surprising shift in policy. The American delegation, -- headed by conservative and "pro-life" former senator James F. Buckley -- in a move closer to the position of that of their opposition in 1974, claimed that population growth could no longer be considered an obstacle to economic development. Rather, the delegation asserted in a formal policy statement that population growth was a "neutral phenomenon" (Finkle and Crane, 1985: 2). In the statement, the US government argued that developing countries should reduce government interference in their economies in order to promote economic growth and that this would reduce fertility (Finkle and Crane, 1985: 2).

The US delegation denied that there was a worldwide population problem, claiming that there had been a demographic "overreaction" in the early 1970s (Finkle and Crane, 1985: 11). While recognizing that "in some cases, immediate population pressures may require short-term efforts to ameliorate them," the statement concluded:

...population control programs alone cannot substitute for the economic reforms that put a society on the road toward growth and, as an aftereffect, toward slower population increase as well (USA, 1984: 575; cited in Finkle and Crane, 1985: 11).

The statements made by the US delegation clearly indicated that the economic reforms advocated by the delegation were those consistent with a market economy. Family planning programmes were criticized, in part, because of the belief that family planning programmes had become too centralized and required too much government intervention, a view which was at odds with the US ideology of the market system.

The reversal in US policy around population at Mexico City led to the decision in 1984 to end US support for the IPPF (the International Planned

Parenthood Federation) and then in 1986 to the withdrawal of all support from the UNFPA (the United Nations Population Fund) (Camp, 1993: 127). This withdrawal reflected the US refusal to fund family planning policies which involved abortion or coercion. The IPPF lost its funding because it refused to force its affiliates to end the provision of abortion services in countries where abortion was legal. The UNFPA had its funding withdrawn two years after the IPPF because it apparently could not provide enough assurances to the US that the organization was "not engaged in, [nor providing] funding for, abortion or coercive family planning programs" (Wulf and Wilson, 1984: 230).¹⁵

The reaction of the US at Mexico City appeared to be a complete shift in the discourse around population from a very powerful actor in the population establishment. Nevertheless, if looked at in context, it is clear that the shift was the result of the changed political situation in the US and did little to change the discourse around population. As Jaquette and Staudt (1985) suggest, "(with) this one stroke the Reagan administration was able to pay a debt to the moral majority...underline its rejection of Third World demands for a New International Order...and reinforce its message that capitalism is the only model that works" (1985:226). If anything, the shift in policy encouraged elites in Third World governments to expand population programmes because they could side-step the issue of their own interests being served based on the notion that they were not implementing policies under the imperialist pressure of the American government.¹⁶ Further,

¹⁵ At the 1994 Cairo Conference, US funding to the UNFPA was restored.

¹⁶ While some feminists had argued that population control was the result of imperialist pressures (notably Mass, 1971), others had begun to recognize that the use of coercive population programmes on the national agendas of many Third World and socialist countries meant that it was patriarchal interests, rather than purely capitalist ones, which were at stake in official attempts to establish control over women's bodies (Kabeer, 1994:198).

despite the formal withdrawal of support to the UNFPA and the IPPF, the money being injected into population control programs from all donor sources, but particularly from Americans and the American government, continued to be large. The United States alone spent \$235 million in 1988 which accounted for about 50 per cent of all population assistance (Cassen, 1994: 23). As recently as 1992, USAID launched, in Uttar Pradesh, India, "the biggest family planning program ever, a 10-year, US\$325 million blitzkrieg" (Stackhouse, 1994: D1).

Despite the huge increases in funding for population control programmes, the lack of progress in bringing about changes in fertility behaviour highlights the limitations of purely individual, supply-driven solutions. Research showing that birth rates in developing countries have declined most in countries where socio-economic development was relatively advanced and family planning programmes strong (Costa Rica, Korea and Singapore) suggest a more promising alternative. Family planning works best where it complements and reinforces certain aspects of development change. In particular, Gita Sen (1989) suggests that reproductive behaviour is most likely to change in conditions of development equity. In other words, where all members of society are benefitting from improved development and not simply a privileged few.

The best illustrations for this viewpoint are found in individual country case studies. Cuba, Sri Lanka, Korea and the Indian state of Kerala are all examples of how equality can affect fertility. Neither Cuba, Sri Lanka, Korea, nor Kerala were involved in intensive population control efforts. Nevertheless, all experienced dramatic declines in fertility rates. By improving social and sometimes economic indicators, these societies created conditions under which the people themselves chose smaller families.

Hartmann (1987) and Kabeer (1994) identify a number of factors which contributed to the demographic transition, including: income and land distribution; employment opportunities and education; mass education; improvements in the position of women; accessible health care and family planning services (1987: 283; 1994: 205).

Despite these examples of successful demographic transition based on improved human development indicators, the belief that family planning alone is the solution to development problems continues to persist. While analysts agree that increasing the desire to produce smaller families is valuable, they state that the need for contraceptives is already high and thus, population control efforts should be increased. In particular, concerns about the possible links between population growth and environmental degradation have given fresh life to arguments that fertility reduction must be accomplished more swiftly than social justice will allow.

The Environment and Population Model

The perceived urgency of the population problem has, in large part, been due to concerns in the West about the negative impact of overpopulation on the environment. Several well-known books have expressed concerns about the implications of rising numbers of people on the well-being of the global environment (Ehrlich and Ehrlich, 1991; Hardin, 1993; Kennedy, 1993). Much of the literature suggests that there is a simple, self evident, mathematical relationship between numbers of people and the environment.¹⁷ This connection between environmental destruction and

¹⁷ This relationship is seen, more subtly, in the well-known formulation: $I=PAT$. This formulation links environmental impact (I) with population growth (P), growth in affluence or consumption per capita (A), and technological efficiency (T). The interactions of people

population growth was strongly emphasized in the political discourse at the United Nations Conference on the Environment and Development (UNCED) or the "Earth Summit" in Rio de Janeiro in June 1992 (Mies and Shiva, 1993: 277).

Numerous examples of this kind of implicit connection in the environmental and population literature can be found. For example, Canada's International Development Research Center (IDRC) prepared a document reporting on their UNCED commitments in which they suggest that the research programs and projects of IDRC have reflected the thoughts expressed by Robert McNamara, past president of the World Bank, "that the increase in human numbers and its environmental and development ramifications are a cause of concern" demanding "immediate action" (IDRC, 1992: 13). The document continues by outlining various contraceptive research and development programs funded by IDRC.

Similarly, in the 1990 "State of the World Population Report," the UNFPA stated that,

...fast population growth in poor countries has begun to make permanent changes to the environment. During the 1990s, these changes will reach critical levels. At the start of the 1990s the choice must be to act decisively to stop population growth, attack poverty and protect the environment. The alternative is to hand on to our children a poisoned inheritance (Sadik, 1990: 2).

On a more radical note, Maurice King in his 1990 article in the medical journal *Lancet*, proposed that, where population pressure is environmentally unsustainable, coercive contraceptive technologies should be used on women

with their environments can only be partially captured by such simple mathematical equations which do not take into account the distribution of resources, incomes, and consumption. As such, these kinds of equations are inadequate predictors of outcomes or guides to policy (Sen, 1994: 70).

and public health care should be denied to children on the basis that it is "de-sustaining." King calls these tactics: "Health in a sustainable ecosystem" (King, 1990: 666).

The fact that industrialization and the over-consumption habits of developed nations have precipitated the acceleration of environmental degradation worldwide is ignored (Mies and Shiva, 1993: 277). Instead of looking at the root causes of such environmental problems as deforestation, climate changes and global warming, environmental proponents attribute these problems to one cause: overpopulation.

Clearly, population growth is not the root problem. For example, Nicholas Guppy's article on tropical deforestation in *Foreign Affairs* criticizes the view that rainforest destruction is caused by slash and burn migrants. Guppy (1984) notes that undisturbed forests are rarely accessible until they are opened up by logging roads. Further, peasant migration usually is not due to a genuine shortage of land but is encouraged by the government "as a convenient safety valve for land hunger and social discontent" (1984: 939). In Brazil, where government policies have led to large scale migration to Amazonia, one per cent of farmers own 43 per cent of the country's farmland (1984: 940).

Further, the reasons for deforestation stem from the over-consumption habits of the West. In Central and Latin America, commercial ranching is the main impetus for deforestation. Since the cost of beef is out of reach of most of the population, beef production mainly serves foreign markets. As with beef production, most tropical wood is also destined for foreign markets. Thus, as Germaine Greer (1984) so aptly notes, the "blind conviction that we have to do something about other people's reproductive behaviour, and that we may have to do it whether they like it or not, derives

from the assumption that the world belongs to us, who have so expertly depleted its resources, rather than to them, who have not" (1984: 491).

Despite the faulty assumptions implicit in many of the arguments linking population growth with environmental degradation, this discourse has served as a new imperative to increase family planning programs. As Sen (1994) notes:

The leap from overly aggregated population-environmental relations to policy prescriptions favouring increased family planning services becomes then an implicit choice of politics, of a particular approach to population policy, to environmental policy. Because it glosses over fundamental issues of power, gender, and class relations, and of distribution, and because it ignores the historical experience of population programs, it has been viewed by many as a retrograde step in the population-development discourse (1994: 70).

Social justice activists, and particularly feminists, have used many of the lessons learned in this critique of the environment-development connection to further their own understanding of the problems with population control. The groups which have had the most influence in these discussions have been women's health advocates. The contribution of these groups to the shaping of a discourse of resistance around population control is based in large part on the articulation of women's experiences with population control programmes.

The Women's Health Movement

In 1994, the International Conference on Population and Development was held in Cairo Egypt. With this conference, a new document was adopted, known as the "Programme of Action," making the WPPA, written at Bucharest and amended in Mexico, a historical document. While many of the

issues in the new "Programme of Action" remain the same as those in the WPPA, other issues -- for example, improving women's status, education (especially for girls), care of the environment, and responsibility and participation of males -- now receive increased attention (Demeny, 1994: 13). New elements include: the recognition of different family forms; access to contraception by unmarried persons, including teens; and, the importance of sexual health. Family planning programs continue to receive strong endorsement, including calls for improved quality and a greater range of services. But family planning is now placed within the broader context of health services, as part of the even broader category of reproductive health. Reproductive health also includes programmes aimed at dealing with the problems of sexually transmitted diseases and AIDS prevention.

Many of the changes to the "Programme of Action" were articulated as a result of pressure from the women's health movement. Women's health activists challenged the rationale on which population policies have been based -- namely that since population control is a social good, it takes precedence over women's well-being and rights. While many women have benefitted from increased access to family planning, population policies have also had negative effects for women. Women's testimonials of abuse which they have suffered as a result of population control campaigns have been part of the emergence of an alternative discourse, articulated by the women's health movement.

Claudio Garcia-Moreno and Amparo Claro (1994) have outlined the vital role that the women's health movement played in shifting the objectives of population policy towards issues of women's empowerment. The paramount concern of the international women's health movement is not macro demographic objectives, but women's health (1994: 47). While

recognizing the great diversity in the women's health movement, Garcia-Moreno and Claro (1994) suggest that, generally, the movement:

...argues that policies and programs should ensure better quality and provide more holistic approaches to women's health services, particularly in the area of reproductive health. The movement also places great importance on the issues of sexuality and gender relations. Policies and programs should include women's representatives at all levels of decision making; promote increased responsibility among men for their own reproductive behavior, for the prevention of sexually transmitted diseases (STDs), and for the health and well-being of their partners and the children they father; provide equal opportunity for women in all aspects of social, economic and political life, for its own sake, not simply as a means to reduce fertility; and pursue sustainable approaches to development that invest directly in people's well-being (1994: 47-48).

Despite differences in approach within the women's health movement, as a group, it has succeeded in challenging the discourse of population control and family planning programmes.

The Debate Over Needs

The need for family planning has been interpreted by different actors in the development field in a number of ways. Nancy Fraser (1989) provides a framework for understanding these contradictory meanings based on what she calls "the politics of needs" (1989:164). In discussing the discourse around needs, Fraser suggests that "needs talk functions as a medium for the making and contesting of political claims: it is an idiom in which political conflict is played out and through which inequalities are symbolically elaborated and challenged" (1989: 161). As an example, in discussions around the issue of childcare, feminists argue that the state should provide parents' need for day

care, while social conservatives insist on children's need for their mother's care, and economic conservatives claim that markets, not governments, are the best institutions for meeting those needs. In other words, the disputes arise over what people need and "who should have the last word in such matters" (Fraser, 1989: 162). The use of needs talk has ensured that it has been "institutionalized as a major vocabulary of political discourse" (1989:162). It is through the articulation of needs, their legitimation, interpretation and struggle to satisfy them, that crucial decisions about public (and social) welfare have been made.

In the context of population control, Naila Kabeer (1994) argues that while everyone, including those in the women's health movement, can agree that there is a need for women to have contraceptive technology, there are significant differences in how that need is interpreted (1994:193). Feminists see access to reproductive technology as an element of reproductive choice and control for women over their lives and bodies. On the other hand, the population control establishment has conflated women's needs for reproductive choice with the policy needs generated by long-standing concerns with population control.

Women's health activists argue that it is necessary to separate the mandate of achieving demographic objectives from meeting women's health and welfare needs (Bruce 1990: 63; Dixon-Mueller, 1993: 202). If the two could be separated, family planning programmes could focus more clearly on meeting individual needs and providing a range of sexual and reproductive services, based on the broader notion of reproductive rights and freedom. Advocates of this position have identified a number of ingredients which are key to any family planning programme which is designed to improve health and expand women's control over reproduction (see Chapter 4). These

ingredients are often absent in population control programmes which attempt to meet unrealistic demographic targets. Under those circumstances, birth control is being imposed on women from above and therefore does not meet the requirements of a programme which respects women's reproductive freedom.

Narratives as Resistance

Fraser (1989) argues that there are various resources available to the members of different groups which they can use to press "needs" claims. In particular, she suggests that one effective resource is the "narrative conventions available for constructing the individual and collective stories that are constitutive of people's social identities" (1989: 165). Women's health activists, while they have used various models of social discourse in an effort to have their version of family planning interpreted as the "need," have placed particular emphasis on the use of narratives.

As discussed earlier in this chapter, the production of knowledge of population issues has been important in defining and legitimating the point of view of the dominant discourse as defined by the population establishment.¹⁸ Thus, contrasting the alternative discourse offered by "local discontinuous, disqualified, illegitimate knowledge" against the dominant knowledge produced by the population establishment was a logical place for those in the women's health movement to begin to understand the realities of the population control discourse.

¹⁸ The population establishment will be further discussed in Chapter 4

As Jagger (1983) insists, knowledge and truth are constructed in a partial way because they reflect the interests of the dominant class.

Because the ruling class has an interest in concealing the way in which it dominates and exploits the rest of the population, the interpretation of reality that it presents will be distorted in characteristic ways. In particular, the suffering of the subordinate classes will be ignored, redescribed as enjoyment or justified as freely chosen, deserved or inevitable (1983: 370).

Articulating the experiences of those outside the dominant paradigm has offered a viewpoint which has helped to realign policies in a way which more closely reflects the situations in which people live. Articulating such experiences, in themselves, mark an act of resistance to the dominant paradigm.

The act of telling stories which document publicly the experience of marginalized groups can validate those experiences. Equally important, in documenting and recording their struggles, the stories of the oppressed can also stand as a forceful challenge to existing analyses of social reality (Parikh, 1994: 22). Doris Sommer (1988) wonders whether autobiographies are "a medium of resistance and counter discourse, the legitimate space for producing that excess which throws doubt on the coherence and power of an exclusive historiography" (1988: 111).

In discussing the use of writing as a political tool used to invite change, Mohanty (1991) suggests that women write and remember as a form of resistance. Mohanty writes:

...resistance is encoded in the practices of remembering, and of writing. Agency is thus figured in the minute, day-to-day practices and struggles of third world women. Coherence of politics and of action comes from a sociality which itself perhaps needs to be rethought. The very practice of remembering against the grain of "public" or hegemonic history, of

locating the silences and the struggle to assert knowledge which is outside the parameters of the dominant, suggests a rethinking of sociality itself (1991: 38).

The resistance of women to the rhetoric of population control is grounded in their lived experiences. It is in the telling of their stories that women can confirm that their own social reality is at odds with the realities of the dominant discourse around population.

During the ICPD in Cairo in September, 1994, people from around the world came together at the NGO Forum for an International Public Hearing on Crimes Against Women Related to Population Policies. At the Public Hearings, women came forward to testify about abuses they have suffered in the name of population control. Such testimonials constitute an important alternative to the dominant discourse and act as a point of resistance to the dominant ideology. The following testimonial offers just such an alternative and, in giving voice to her personal experience, the woman testifying makes clear some of the problems which have been inherent to population control programmes.

My name is Halima Begum. I am 32 years old. My husband works in a development organization. He is a low paid worker. His income is not enough to maintain the family. I have two children, one son and one daughter. The son is 8 years and the daughter is 6 years old. I never used any contraceptive methods before.

When my daughter was only one month old, a family planning worker visited my home. She talked about ways to live a happy life. She said to have two children, especially to have two children is a way of becoming happy, so I should not have any more children. She said, the family will be happy and my health will remain in good condition. I was very good in terms of health conditions. She said to persuade me with all these words. Then one day she told me that if I had an operation, she will give me a card by which I could have rice and wheat on a routine basis. To build the house, she promised to give tins. Since my husband earned very low income, I thought this would be a good opportunity to bring happiness to the family...

When I decided to have the operation, I did not tell my husband and my mother-in-law, thinking that they would not permit me to do the operation. But my daughter was an infant of one month. I had to keep her at home for one day. So I was forced to tell them about my decision. At first my husband did not approve my decision. Then the family planning worker came and persuaded my husband. She assured him that she will stay with me all the time. And she further said, "her operation is going to bring happiness to your family. You will be able to raise your children properly with education." My husband believed her and let me go for operation. It was in 1988 when I went to the family planning clinic with the family planning worker. In the family planning center they allowed me to wear a new saree. Then they gave me two tablets to swallow. I sat on a bed. It was the operation table. They gave an injection. I do not know what happened after that.

In the middle of the night I regained consciousness. I was in pain. Next morning at 11:00 I came back to my home. Before discharging me from the center they gave me Tk. 175 (US\$4.50). I went to the center after seven days to open the stitch.

Since my operation, I have suffered from various complications. The menstruation became irregular, I have excessive white discharge. The operation side is itching. My health has deteriorated. I look like an old woman. I can not do any work at my house. Specially during the harvesting season, we are busy with boiling of paddy. I can not do these works any more. The family can not afford to hire labour for these works.

I agreed to have the operation for the sake of making my family a happy one by receiving support from the government. No promise was fulfilled. I was not given any card to receive wheat or rice. The family planning worker does not visit my house any more.

My husband and mother-in-law are all angry with me to take such a decision. What can I do? I know I made a mistake. I was cheated. Besides having an unhappy relation with my family, I am suffering physically.

Testimony by Halima Begum, Bangladesh

Despite the strength the population control discourse in Bangladesh (Hartmann, 1987 and 1995; Gillespie, 1994), women like Halima Begum have come forward to share the stories of their personal experiences with population control. Many lessons have been learned from these stories, and

others like them,¹⁹ which shape the discourse of resistance and, ultimately, the dominant discourse. It is through giving voice to their experience that the negative impacts of top-down population programmes have been articulated and translated into needs and, thus, how reverse discourses have been conceptualized.

The reverse discourse conceptualized by the women's health movement has offered both a powerful critique of the population control ideology as well as policy alternatives. Nevertheless, this challenge has not been translated into a change in the dominant discourse. Rather, what began as a reverse discourse has, in effect, become part of the mainstream discourse in a way which does not challenge the underlying ideology of population control, as will be demonstrated in Part III.

The Transformation of a Reverse Discourse into a Normalizing Discourse

Pressures from the environmental movement and, in particular, the women's health movement, forced the population establishment to broaden the debate to include the concerns of both of these groups. However, rather than incorporating the problems of development, the environment and population into a new discourse which would respect the concerns which women health activists had outlined, the new concept sought to repackage the old policy prescriptions into a more palatable form.

While the greater attention paid to women's rights and empowerment by the population establishment at Cairo was certainly welcome, many feminists are skeptical about what these changes really mean for women. There are a number of problematic aspects of the new focus on women.

¹⁹ For more stories which make this point, see Chapter 4.

Women have always been viewed as the targets for population control through family planning (Kabeer, 1992: 11). The "new" understanding that women's status affects fertility patterns simply continues this focus, viewing women as the key to reducing population growth. Viewing women in such an instrumental fashion suggests that the new focus on empowering women is not about a commitment to the rights of women, but rather, remains simply a commitment to lowering birth rates (Hartmann, 1994: 8).

Education for women is seen as an important goal in reducing fertility. Margaret Catley-Carlson, former head of the Canadian International Development Agency (CIDA) and now president of the Population Council, is a strong advocate of this route to lowered population growth.

We find predictably that girls that have no education want the standard number of six kids; girls that have over ten years of education usually have a family size desire of around three children. So that ten-year investment decreases the demand for children by a factor of about three...you can show that this factor, and this factor alone, is having quite an extraordinary fertility effect (CBC, 1994: 38).

This focus on educating girls, however, while assumed to be of benefit to girls regardless of fertility outcomes,²⁰ is a very safe move towards the "empowerment of women" since it does not seriously challenge the *status quo*. As Hartmann (1994) suggests, "while everyone is all for empowering women, there is no talk about empowering poor or marginalized men, or addressing inequities between and within countries" (1994: 9). In other words, Hartmann is pointing to the lack of attention to issues of power which would be truly empowering for women. Rather, there is the mistaken belief that

²⁰ Though see Green, 1994 for a critique of this assumption.

"women's status is to be raised in the absence of profound structural changes in the social and economic order" (1994: 9).

It is ironic to note that the "Programme of Action" calls for investment of \$17 billion in family planning and population (UN, 1994: 81) at a time when there has been a massive reduction in basic health and social services throughout the Third World.²¹ UNICEF estimates that since the mid-1980s, health and education spending declined by 50 per cent and 25 per cent respectively in the world's 37 poorest countries (UNICEF, 1994). The commitment to increased education for girls needs to be questioned given these figures. Further, the drop in spending on health care calls into question the commitments made at Cairo concerning family planning programmes. The document claims to support family planning programmes in the context of broader provisions of health care, particularly reproductive health. Yet, how effective can these programmes hope to be when the context is such that access to health care and health infrastructure is eroding? As Caren Grown argues, the increase in World Bank and International Monetary Fund structural adjustment policies, which lead to increased poverty and insecurity and greater workloads for women, will inevitably lead both to fertility increases and lowered status for women (Grown, 1994: 63).

²¹ The problem with this inconsistency in funding is demonstrated clearly in an examination of Canadian donor assistance. By 1987, the Canadian International Development Agency (CIDA) was the fourth largest donor in the population sector worldwide and the second largest bilateral donor. Though the exact figures of CIDA funding on population are unreliable, we do know that the total CIDA expenditures for "human development priorities" (e.g., education and health) are only 10 per cent of overall spending, one of the lowest rates among all donor countries. Canadian NGOs have recommended that CIDA devote closer to 60 per cent of overall spending on human development priorities. If, as the Cairo document suggests, the nations of the world really do believe in women's health and women's rights, then we need to ensure that our government invests in programs that raise women's health and education levels and that ensure women's and men's rights.

Despite the rhetoric around women's rights, the consensus of the document was still, as always, family planning. As a result of pressure from women's groups, the document states that family planning should be made in the context of the broader area of reproductive health. However, the lack of money which has been allocated to it speaks volumes for where the donor and recipient government's priorities lie. Of the \$US17 billion which was committed by the year 2000 to population programs, \$10.2 billion is for family planning but only \$5 billion is allotted for reproductive health needs (UN, 1994: 81). Another \$500 million is allocated for basic research, data and population and development policy analysis. There are no funds specifically allocated for all the issues, such as programmes and research aimed at increasing women's status, reproductive and sexual health care, education and so on, that the document claims to support and on which action is needed.

The continued emphasis in the Cairo document on population programs and family planning may skew priorities and funding within the Third World and on the part of donor countries. For example, during the massive World Bank Population program in Bangladesh between 1986 and 1992 (to which Canada contributed), contraceptive use grew from 25 per cent to 40 per cent. However, the objective of reducing maternal mortality was marginal and there was no change in child mortality statistics. The next phase of that project is budgeted at over \$600 million dollars and the key objective is stated as reducing fertility rates (Government of Canada, 1994: 2). Thus, the focus on family planning is at odds with the stated intentions of the document.

Thus, there are two main criticisms of the document produced at the International Conference on Population and Development. First, the goal of

improving women's status was seen as a way to reduce population, and therefore poverty and environmental degradation. This view objectifies women by seeing increased status as a means to an end, rather than as a laudable goal in itself, and targets women's reproductive behaviour for socially engineered goals (Hartmann, 1987, 11). Second, the amount of money actually put into the increased status of women gives an accurate picture of the seriousness with which policy-makers take this goal. The United Nations Fund for Population Activities (UNFPA) in 1994 devoted only 5.1 per cent of its total assistance to the broader area of women, population and development, as opposed to 50.6 per cent to family planning programs (UNFPA, 1994a: 3).

The discourse used during the conference was constructed so as to extend the focus of the conference, using the concerns of the women's health movement, while at the same time, not changing the core principles of the discourse. This shift was achieved by articulating the population discourse in a new, more broadened way. Robert Cassen (1994) summarizes the new concern for a more nuanced understanding of the interactions between population and development in the following way:

...the influence of population is mediated by a range of other factors, and the influence of population growth depends very much on how those other factors behave or are managed. Population growth can affect some of these mediating factors; it also serves as a long-term contributory element itself. Institutional capacity to set the right policies and incentives in place is critical in determining whether or not population growth will be accommodated without major negative consequences; unfortunately it is often the same poor countries in which this capacity is lacking. For such countries, it seems quite clear that slower population growth will prove beneficial (1994: 4-5).

Thus, while the problem is understood to be more nuanced, to involve issues of development, women's status, infant mortality and so on, it is the perceived urgency of the problem, given the spectre of environmental devastation and increasing poverty, which leads back to the traditional solution of modern contraceptives.

This broadened discourse now centres around the notion of "synergism." The term "synergism" is used in the biological sciences and refers to a situation where the "cooperative action of discrete agencies (or drugs or muscles) [is] such that the total effect is greater than the sum of the two or more effects taken independently" (Merriam-Webster, 1986: 2320). In other words, synergy is used to refer to any relationship where there is expected to be a "collaborative benefit" (Green, 1994: 1).

In the case of development policy objectives, the use of the term "synergism" appears where it is expected that the objectives of poverty alleviation, protection of the environment and slowed population growth are mutual objectives (Green, 1994: 11). In other words, it is assumed that policy prescriptions which address one of these three items will have positive implications for the other two.

The synergism theory is summarized neatly by Britain's Overseas Development Administration in a paper presented at the Third Preparatory meeting for the United Nations Conference on Population and Development. It suggests that:

Population growth, environmental degradation and poverty are not separate problems, with separate causes. Equally, it is clear that these problems share common solutions. The implications of this is interventions should be directed at the nexus of problems rather than at 'sectoral' problems, and should aim to take advantage of synergistic effects and complementarities. Thus, the identification of interventions which simultaneously alleviate population-

environment-poverty problems should be favoured (ODA, 1991: 20, cited in Green, 1994: 10-11).

While, in theory, the notion of synergism does not privilege one solution over another, in actual fact, it is intervention in the population sector which is most favoured in the literature. The need to address problems synergistically is not seen as a need to address issues of, for example, inequitable distribution of land and resources which could act to improve both poverty and environmental degradation, but as a need for population control in the guise of family planning programs. In a 1994 UN Technical Report the authors state that "It nevertheless remains true that lowering population growth will have synergistic effects" (UNFPA, 1994b: 12). In other words, lowering population growth will lead to other "good things" happening. And the best means of reducing population growth is, once again, to provide family planning services.

An independent inquiry into population and development, commissioned by the Australian Government in April, 1994 reported the following:

Slowing population growth from high current levels...is advantageous to economic development, health, food availability, housing, poverty, the environment, and possibly education. In several of these areas, for example poverty, we do not know the size of the effect. And in some sectors where we do have estimates of individual outcomes, the impacts are relatively small. These small effects, however, are likely to be synergistic and cumulative. While other economic and social policies may affect one or a few of these outcomes more directly, few, if any, are likely to have the breadth of impact of family planning, where the direct costs are relatively modest (Australian Government, 1994).

In other words, we return, once again, to the underlying discourse which coheres the debate around population.

As history has shown us, however, universal solutions to development problems have rarely been effective or equitable, in part because they assume that the entire population will benefit from development initiatives when, in fact, the interests of all are not the same (see, for example, Sen and Grown, 1987). In particular, the use of population control methods, as I demonstrate in Chapter 4, have not been in the interests of women. Other less controversial policies to address population, often referred to as "win-win" policies, are also not necessarily appropriate. Cathy Green (1994), in her discussion paper, "Poverty, Population and Environment: Does "Synergism" Work for Women?" critiques the notion of synergy by arguing that the concept fails to encompass a gender analysis "despite evoking women as 'agents of synergism'" (1994: 2). In particular, she argues that the 'synergistic,' 'win-win' relationship in which education for girls and women is automatically correlated with fertility decline is based on a series of faulty assumptions (1994: 28). In fact, she argues that the relationship is neither straightforward, nor necessarily equitable in that it does not address the possibility that any such policy will create new winners and losers. "Analysis of the sex ratios literature suggests that the pursuit of win-win outcomes overlooks the tradeoffs which already occur within education and family planning sectors" (1994: 35).

When implementing any policy which expects synergistic outcomes in population/environment/poverty, it is necessary for policy makers to consider the different interests within the family which dictate the number of children born. The notion that the provision of contraceptives alone will improve not only population, but poverty and environmental degradation as well is seriously flawed. In the words of Lappe and Schurman (1988)

...to believe that the mere provision of contraception will suddenly allow women to step out of their subordinate role in the family, or alter the fact that children represent a source of security for many third world parents, is to ignore the findings of decades of fertility oriented research (1988: 39).

For example, Kabeer (1985) notes that there are different desires within a household in terms of family size. Although families may benefit from having children, those costs and benefits are not shared equally among family members (1985: 84). Decisions about family size may depend on the outcome of intra-household bargaining over competing interests (Green, 1994: 31). Thus, a major step towards altering family size preference would involve tackling issues of power between women and men.

These micro issues, however, are not addressed in large scale universal policy prescriptions based on synergism. Nevertheless, the discourse at the ICPD utilized the new theories of synergism in order to argue for the continued importance of family planning.

Conclusion

The ideology of population control has remained strong despite changes in the rationale for its existence. Even after a slight nuancing in the media debate around Cairo, within eight months, the debate once again focused on population as crisis with the solution as population control (see The Globe and Mail, Saturday, March 4, 1995, A1). The view of population as the root cause of underdevelopment and its solution of population control through modern contraceptive distribution have maintained mainstream dominance despite challenges from the feminist movement.

The solutions offered by the women's health movement which would shift the focus away from issues of population and focus on issues of

women's health and empowerment offer a rational alternative to the dominant discourse. The strength of the population control discourse, which sees women as objects rather than subjects of change, continues to ensure that this paradigm shift towards women does not happen. The challenge ahead lies in effectively critiquing population control discourse and in attempting to understand the ways in which the dominant discourse has affected not simply the delivery of contraceptives in developing countries, but also the very development of those contraceptives.

In the next chapter, I examine the actors involved in perpetuating the mainstream population control discourse. The strength of the critique of this discourse is demonstrated using the voices of women who are saying, loudly and clearly, that population control is not in their interests despite claims by the population establishment to the contrary. Despite these competing claims, a number of interests work to ensure that the population establishment is able to maintain the discourse. It is through the maintenance of this dominant paradigm that those advocating population discourse can continue to shape the direction of contraceptive research.

Chapter 4

Legitimation and Control: The Who's and Why's of Population Control

Introduction

In the previous chapter, I argued that there have been significant challenges to the population control paradigm and that the discourse has adapted to these challenges in such a way that the dominant theme, that population is a crisis, the solution to which is the distribution of modern contraceptives, has remained intact. There are a number of actors involved in the maintenance of this discourse. These actors, as suggested in the previous chapter, increasingly use the language of the women's health activists in a way which suggests that population control programmes are in the interest of women. The voices of women, however, suggest that such programmes, in fact, deny women their rights. Despite these voices, the population establishment is able to maintain this discourse due to a number of factors which act to legitimate its ideology.

In this chapter, I first outline the groups and individuals which have perpetuated the mainstream discourse around population control. I refer to this group of actors as the "population establishment," and suggest that it is composed of a variety of groups and individuals including donors, multilateral institutions, certain non-governmental organizations, consulting groups and academic centres working for larger population establishment organizations, and finally, the information networks which perpetuate population control rhetoric. This analysis makes clear the organizational strength of the population control paradigm. I do not mean to

suggest that this group works together in a conspiratorial way, but rather, I mean to show that the common purpose of those within the population establishment has led to particular ideological beliefs, discourses, and resultant policy prescriptions.

The discourse of the population establishment has, recently, included claims that population control programmes are in the interests of women. Such claims are made based on the belief that there is an "unmet need" for family planning which the population establishment claims to fill. It is suggested that these programmes increase women's freedom, their ability to "choose," and lead to women's empowerment. However, population control programmes do not meet the self-defined needs of women for family planning in the larger context of reproductive health and freedom. Population control is based on the goal of reducing population rather than on the reproductive health and rights of women. In the second part of this chapter, using testimonials from women around the world, I illustrate the extent to which population programmes have had a negative impact on women. It is through giving voice to their experience that the negative impacts of top-down population programmes have been articulated and resistance has been conceptualized.

That population control is not in the best interest of women is illustrated by the stories. Nevertheless, the population establishment continues to use the rhetoric that population control is beneficial to women as a means of maintaining the population control discourse. The population establishment is able to maintain the discourse, despite opposition, in large part, because of the strength of the interests which serve to perpetuate the discourse. In the final section of this chapter, I outline some of the interests at work which help to legitimate the position of the population establishment.

While the list is not exhaustive, I touch on some of the major themes which are prevalent in the literature, including racism, security interests, and profit motivation. These interests sometimes overlap directly with the interests of the population establishment, as for example in the case of profit motivations in the research and development of contraceptives, and at other times merely act to make the ideology of population control appear "natural."

The Population Establishment

Foucault argues that "truth" is centred in the institutions which produce a particular knowledge and that the "truth" is also produced and transmitted "under the control, dominant if not exclusive, of a few great political and economic apparatuses" (Foucault, 1981: 130). In the field of population, the institutions and political and economic actors which perpetuate mainstream discourse around population control are collectively referred to as the "population establishment" (Simon, 1991; Gillespie, 1994; Hartmann, 1995).

In this paper, I define the "population establishment" as the group of organizations that perpetuates the mainstream discourse around population control and that implements policies reflecting this view. It is important to determine which groups and individuals constitute the population establishment in order to evaluate better the ways in which the ideology of population control is maintained and what interests are at work in legitimating it. While the population establishment is bound by a common sense of purpose in its pursuit of population control, it is important to recognize that it is by no means a monolithic group (Hartmann, 1991: 15). As Simon (1991) suggests, when discussing the population establishment one

must realize that it is not a conspiracy which is suggested, but "rather a consensus of belief that leads to concerted action which can be the equivalent of joint planning even if there is not actual joint planning" (1991: 42). Indeed, the population establishment is made up of a wide range of organizations and individuals whose activities and goals are often quite different and conflicting (Hartmann, 1987: 111). In the following section, I outline the groups which traditionally have been identified as members of the population establishment.

The first significant group is the donor countries. The largest bilateral donor of assistance in the field of population is the United States Agency for International Development (USAID) (Warwick, 1982; Hartmann, 1987 and 1991; Simon, 1991). The governments of other developed countries such as Canada, Japan, Britain, Sweden, Norway, West Germany, the Netherlands, Denmark, Australia, Switzerland, and Belgium also provide significant amounts to worldwide population assistance.²² Donors influence recipient governments by creating conditions which lead them to be aware of a population problem, and also "by defining the dominant emphasis on family planning programmes and by pressuring for specific results in implementation" (Warwick, 1982: 97).

²² While developing country governments pay for the bulk of the costs of family planning programmes, public expenditures are concentrated in relatively few countries where political commitment to family planning is strong. In wealthier developing countries, private consumers account for a significant share of family planning expenditure. Many poorer countries, especially in Africa, rely heavily on external donor assistance to finance the high costs of establishing new family planning programs (PAI, 1994).

Currently, over \$3 billion per year is spent on family planning in less developed countries (Estimates may be much higher when costs of research and of technical services provided by international population agencies and other undocumented expenditures are also included) While external contributions finance roughly 25 per cent of family planning costs, this figure is much higher in individual countries (PAI, 1994).

Many Third World leaders have proved more than willing to cooperate in the process of population control. There is often a common interest between the population establishment and Third World elites, which generally have more in common with members of the population establishment than they do with the majority of the population in their own countries (Hartmann, 1995:124). This already congenial relationship is further fostered through the use of material rewards and incentives (Hartmann, 1995: 124). Bringing birth rates down through population control measures is an attractive policy option since it does not jeopardize the privileged position of Third World elites in the same way that attacking poverty and inequality would.

The second group which makes up the population establishment is comprised of multilateral institutions such as the World Bank and the United Nations Fund for Population Activity (UNFPA). With a budget of \$US246 million in 1994, the UNFPA is the largest multilateral member of the population establishment (UNFPA, 1994a: 1). While, theoretically, the UNFPA is meant to support a wide range of population related activities, in practice, it is concerned primarily with the funding of family planning programmes which accounts for well over half its annual budget (UNFPA, 1994a: 3).²³ The UNFPA, which does not receive contributions from the UN regular budget but depends entirely for support on voluntary contributions, has been instrumental in building an international "consensus" around the need for population control. Although, officially, the UNFPA is committed to

²³ Budget breakdown for UNFPA is as follows: family planning 50.6 per cent; information, education and communication 18.3 per cent; formulation and evaluation of population policies 8.5 per cent; population dynamics 6.8 per cent; basic data collection 6.4 per cent; special programmes (including women, population and development) 5.1 per cent; multi-sectoral activities 4.2 per cent (UNFPA, 1994a: 3).

voluntarism in its family planning programmes, it has supported a number of coercive national family-planning programs.²⁴ In fact, in 1989, the UNFPA awarded its "population award" to the Indonesian government (Zachary, 1989: 6) which has a well-documented history of population abuses and administrative duress (Hartmann, 1995: 78).

The World Bank is the second largest source of intergovernmental assistance. The annual dollar total of family planning components in new loans from the World Bank has more than doubled since the mid-1980s. New commitments are expected to be about \$US200 million in fiscal year 1994. There are currently more than 70 population and family planning related projects in the Bank's active portfolio; they represent more than \$1 billion in total loans and credits for population work (World Bank, 1994: 10). The Bank freely admits to the use of lending policies which could be defined as coercive, and the use of these policies in the furtherance of population objectives are no exception. Offering credit to governments that agree to implement population programs and/or threatening the withdrawal of development funds are the means by which the Bank can enlist the reluctant cooperation of heads of state and key ministries in a planned programme of population reduction (Information Project for Africa, Inc. 1993: 53). A 1992 Bank publication called Population and the World Bank: Implications from Eight Case Studies makes clear this policy of loan conditionality when it states that "the Bank can sometimes go beyond discussion by making development of a policy statement (on population) a lending condition": (World Bank, 1992: 61). Given the Bank's unique ability to compel developing countries to

²⁴ For example, China, India and Indonesia all have population programmes, strongly supported by the UNFPA, which have been heavily criticized for their use of coercion, quotas and administrative duress

implement population programs, the Bank stands as a significant member of the population establishment.

The third group is comprised of non-governmental organizations which are closely linked with the population establishment and are often funded by them. The largest of these in the population sector is the International Planned Parenthood Federation (IPPF) headquartered in London. In 1985, the IPPF lost United States government funding because it refused to sign an agreement which would have forced its 117 member family planning associations to stop all abortion activities. While the IPPF is progressive in its understanding that family planning is a basic human right, they use the rhetoric of overpopulation to ensure that women have choice in family planning methods. However, that "choice" includes the choice of unsafe contraceptives distributed in unsafe settings (Hartmann, 1987: 115). As a result, the IPPF's mandate effectively has paved the way for population control programmes which neglect the health of women. Other non-governmental organizations which develop and deliver family planning services in developing countries include the Association for Voluntary Surgical Contraception, the Pathfinder Fund (a US-based group which, unlike the IPPF, agreed to sign the agreement with the US government to stop funding abortion services), Population Services International and Family Planning International Assistance. The goal of most of these groups is to provide family planning services and to work towards population limitation.

Another group of non-governmental organizations is comprised of the many environmental groups which are forging a growing connection with the population establishment. The joining together of environmental and population groups is most apparent in the formation of the Global Tomorrow Coalition (GTC), which includes more than 50 organizations and represents

over 5 million members. Betsy Hartmann (1991) has argued that the population lobby's future funding depends on it making the case that overpopulation in the Third World is the major cause of environmental degradation (1991: 17). The Sierra Club and the Audubon Society have population networks throughout the US that encourage people to write letters and organize media attention around population issues. The Audubon Society has a population activist Boot Camp, where people come together to learn how to be more effective population control advocates (Hartmann, 1991: 18). The environmental groups are important because they are experienced and influential lobbyists, particularly in the US (Simon, 1991: 40).

A third group of non-governmental organizations includes foundations and institutions such as the Population Council, the Ford Foundation and the Rockefeller Foundation. All of these private groups have played a pivotal role both in terms of the amounts of funds they provide, in demonstrating the acceptability of family planning in national circumstances, and, in creating an organizational base for future expansion (Warwick 1982: 94; Rockefeller Foundation, 1993: 33-55). The Population Council is one of the world's most respected organizations on questions of population policy in the South (Warwick, 1982: 57). They also provide technical assistance and, importantly, conduct biomedical research with a strong emphasis on developing more effective contraceptives.²⁵

The Ford Foundation began as the largest source of funds to developing countries for population activities (Caldwell and Caldwell, 1986:

²⁵ The Population Council developed the contraceptive device Norplant and holds the worldwide patent on its use. Norplant is a long-acting hormonal contraceptive inserted under the skin. It consists of silicone tubes filled with a synthetic hormone, a progestagen called levonorgestrel. The synthetic hormone is released slowly into the body after the capsules are surgically implanted, usually in a woman's upper arm. The capsules last for about five years, after which time, they need to be surgically removed (WHI, 1995: 44).

27). It was uniquely involved in the establishment of the field of population and played a leading role in drawing world attention to population questions. The Ford Foundation was involved in all aspects of the population field from family planning programmes to academic research (Caldwell and Caldwell, 1986; also see Warwick, 1982: 51-2). Over the years, Ford's involvement in population has tapered off, although they are still involved in maintaining the discourse around population.

Lobby groups and campaigners who act to build the population control constituency, lobby government and influence the media are a fourth component of the population establishment. They tend to take a more extreme line with regard to population. For example, the group Zero Population Growth believes that overpopulation is the greatest hazard in the world, causing everything from pollution, global warming, reduction in wildlife and fisheries, to poverty and poor health for women (The ZPG Reporter, 1994). Of all the pressure groups, the most important is the Population Crisis Committee (PCC), which is an influential lobbyist for population control in the United States. Its board of directors is made up of retired ambassadors and generals, prominent businessmen and other celebrities. As such, it has more of an impact than its modest budget would suggest (Warwick, 1982: 65). PCC reports on progress towards population stabilization by focusing exclusively on access to birth control in order to "make clear that a much more massive increase in overall availability of modern birth control methods will be needed...if the world is to reach population stabilization in the next century at less than double the current 5.4 billion people" (PCC, 1992).

Consulting groups working for the population establishment and academic centres, while on the fringe of the population establishment, make

wasn't told that there are other methods" (Namibia interview(a),1994).²⁶ Another Namibian woman states: "I wasn't asked to choose. All I was asked was my age and received a Noestril shot and told when to come back" (Namibia interview(b), 1994). These women did not have the freedom to choose among a variety of methods. "There was no choice. I was not told about other methods therefore I also didn't ask for anything else" (Namibia interview(e), 1994).

Medical support and health services do not need to come in the guise of modernity and health professionals. Respect for local culture and local health providers, and the incorporation of traditional fertility control methods practiced by the community, if they are safe, can be an important addition to the choices available. Further, many traditional methods can have significant advantages over modern methods.

A woman in the Philippines, discussing the use of traditional herbal contraceptives, points to the benefits of these methods when she suggests:

Well you know how expensive it is here to have check-up, right. There are public hospitals and clinics that I can go to, but you see I don't want to spend my whole day falling in line there just to get a prescription of a contraception which I can not also afford to buy regularly (Philippines interview, 1994).

She goes on to suggest that her mother may have successfully utilized traditional methods of birth control. "I heard her and my father talking about it one night. I am not sure though, but I think it is an indigenous method they used" (Philippines interview, 1994).

²⁶ The interviews used in this chapter were, for the most part, conducted anonymously. Therefore, I use the country in which the interview took place as the reference point for each interview. Where more than one interview took place in the same country, I indicate a letter which corresponds to the interview. The interviews have been edited for clarity only.

a substantial contribution to the dominant discourse. Among the main consultancy firms involved in population work are Development Associates, the Futures Group, and Westinghouse Health Systems (Hartmann, 1987:117). The Futures Group, for example, engages in a substantial amount of population propaganda. This group has developed a system called RAPID - Resources for the Awareness of Population Impact on Development - used to build political support for population control programmes in developing countries (Stover and Goliber, 1992). This system dramatizes the perils of overpopulation "with simple graphs, highly selective statistics, and the kind of elementary Malthusian reasoning that attributes almost every social ill to high fertility" (Hartmann, 1987: 117).

A number of universities receive funding from USAID for their research and training centres in population. These centres include Johns Hopkins University, Columbia University, University of Michigan, Georgetown University, University of North Carolina, Northwestern University and Tulane University (see PCC, 1985). A linkage project between USAID and Johns Hopkins University with three universities in Nigeria has as its stated objective: "Playing a key role in the process of determining national priorities in health, population and development" (Information Project for Africa, Inc., 1993: 70). The linkage allows Johns Hopkins to play a part in determining the priorities of the national development and population program, all under the guise of the local universities.

Finally, while not part of the population establishment itself, it is important to understand how the population establishment works with other institutions to perpetuate its version of the truth. Of particular interest is the role which information networks play in perpetuating the dominant view of population. As discussed above, the media are targeted by the population

lobby to convey their version of reality. The dominant discourse is also perpetuated through the bureaucratization of population control. For example, Norma Lundberg (1986) raises a number of questions about what part libraries play in the ideological infrastructure of the population control establishment. She argues that there is a relationship between individuals and institutions which is mediated by documents in which the "use of language, the concepts put forward, the links with other institutions and organizations, the references to other documents can form the focus of a critical reading" (1986: 34). By filing certain information under certain headings and not providing alternative information, the author argues, professional practices of librarians reinforce the recursive nature of the movement of information which favours particular sources of information. For example, a document providing information about birth control can become part of the structure that organizes birth control by directing women to particular organizations and information, drawing attention to only certain kinds of birth control methods and so on. Because libraries acquire such information from certain sectors and disseminate it, Lundberg suggests, the public library is an organization which needs to be added to "the complex of organizations that comprise the ruling apparatus" (1986, 36).

Institutional Momentum

The population establishment is important institutionally because its ideological views effectively have shaped the dominant population discourse. This ideology of population control has taken the form of a set of ideas expressing a desired policy outcome. As described in the previous chapter, while the ideas and the policy prescriptions have remained the same, the

arguments supporting these ideas and prescriptions have undergone numerous changes. Challenges to the mainstream discourse have come from within the population establishment itself as well as from new actors. For example, John D. Rockefeller III, former president of the Population Council and a person who virtually symbolized the establishment in the population field, made a speech in 1974 which began to question the "family planning approach."

For many years a sense of urgency caused me to concentrate on the family-planning approach. Family planning seemed simpler and more direct. Yet, the evidence has been mounting, particularly in the past decade, to indicate that family planning alone is not adequate. I come to Bucharest with an urgent call for a deep and probing re-appraisal of all that has been done in the population field (CBC, 1994: 32, Archival Tape).

This speech would not be considered very radical in today's terms, in that it is merely indicating that population may not be a question solely of family planning since other factors need to be taken into account. However, in the context of the times, this speech was taken to be a "betrayal of the values and the stated policies of the Population Council and the family planning establishment" (CBC, 1994: 32). Rockefeller's challenge to family-planning orthodoxy was a starting point in the challenges made to the population establishment. As shown, the establishment has been able to absorb that challenge into its ideology, and despite the existence of internal, as well as external, challenges, the maintenance of this discourse has been effected through the strength of the population establishment.

One of the main challenges, originating outside the population establishment, has come from those women who are on the receiving end of population control policies. It is through their personal experience that health

advocates have recognized that the approach to family planning advocated by the population establishment is not only ineffective in providing services, but also often creates reproductive health problems for women, violates their basic dignity and diverts resources from other primary and preventative health programmes (Sen, 1994: 65) It is through listening to the voices of women that the contradictions inherent in the larger discourse of population and development articulated by the population establishment become clear.

Women's Voices in Reproductive Decision-Making

In this section, using testimonials provided by women around the world who have experienced population control, I show that population programmes may not be in the interests of those women using them, despite claims to the contrary by the population establishment. As discussed in Chapter 1, the interviews which provide the backdrop for this chapter were carried out with women in both North America and the Third World. Some of the women were not directly interviewed, but answered in response to an interview guide which was mailed out (see Appendix 2 for questions and letter). I also use testimonials given by women at the Public Hearings in Cairo. All interviews which are part of the WHI interview set are anonymous while testimonials given at Cairo are cited with the women's names.

In order for any family planning programme to be considered beneficial to women and designed in their interests, a minimal number of conditions would need to be observed. As already indicated in the earlier discussion of reproductive freedom, the observance of these conditions alone is not enough, since there are many social justice goals which would also need to be fulfilled for true reproductive freedom to take place. However,

these points specifically address some of the conditions which would be necessary within family planning programmes. These conditions include freedom of choice among appropriate family planning methods; fully informed consent; the provision of a range of reproductive health services with adequate quality of care, including basic health care; counselling for male and female methods; respect for local culture and traditional methods; and freedom from pressure and coercion, including incentives, disincentives, enforced production targets and quotas and piecework incentives for implementers. However, despite the assurances by the population establishment that many of these conditions are being met, family planning programmes which are based on population control objectives do not meet these conditions.

Choice and Consent

A feminist perspective on reproductive health values freedom of choice among a broad range of appropriate family planning methods. This includes the right for women to use a method which is less effective than other alternatives, to use a method only sporadically, to switch between methods, or to refuse to use any method (Dixon-Meuller, 1994: 208). Each woman will weigh the costs and benefits of using particular methods at various stages in her life differently (see Bruce, 1987). In population programmes, however, the drive to lower birth rates has meant that the more effective methods -- IUDs, sterilization and hormonal contraception -- are most widely promoted (and developed). As a Namibian woman recently testified: "I was influenced in my choice of contraceptive by our local health workers. They told me that Noestril (a long acting hormonal injectable) is good for a woman who has no children or who has only one child like me. I

wasn't told that there are other methods" (Namibia interview(a),1994).²⁶ Another Namibian woman states: "I wasn't asked to choose. All I was asked was my age and received a Noestril shot and told when to come back" (Namibia interview(b), 1994). These women did not have the freedom to choose among a variety of methods. "There was no choice. I was not told about other methods therefore I also didn't ask for anything else" (Namibia interview(e), 1994).

Medical support and health services do not need to come in the guise of modernity and health professionals. Respect for local culture and local health providers, and the incorporation of traditional fertility control methods practiced by the community, if they are safe, can be an important addition to the choices available. Further, many traditional methods can have significant advantages over modern methods.

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Medical texts and anthropological studies indicate that women have, for centuries, universally sought to control their fertility (Wajcman, 1994: 168). However, as the medical profession has claimed control over the use of birth control, "traditional methods have been uniformly rejected as primitive, cruel, dangerous or simply nonsense" (Faulkner and Arnold, 1985:135). As a result, modern contraceptive methods have been advocated as the most appropriate birth control method by well-funded foreign and domestic agencies.²⁷ Thus, many traditional methods which are both culturally appropriate, and take local conditions into account,²⁸ may not be fully utilized in efforts to increase women's control over fertility. In other words, modern contraceptive technology may displace some traditional methods of birth control and discourage further innovation of techniques which are more appropriate.

While there has been a focus on particular types of contraceptive technologies, the population control policies in the Third World generally have focused on women, since it is they who bear children (see Germain et al, 1994; Kabeer, 1992). In the Philippines, for example, health workers in the clinics do not demand that men come for counselling sessions. Men are required to come for family planning lessons before they get married or their marriage license will not be issued. However, it has been documented that these certificates of attendance can be bought for a fee. As a Filipino woman noted:

²⁷ Modern methods are seen as the only appropriate methods, despite the fact that, since there are only so many ways that birth can be prevented, most traditional methods have a counterpart in modern methods

²⁸ The introduction of many modern methods of contraception could create serious social problems in some cultures, or their inappropriateness could simply lead to non-acceptance of the method. For example, in many cultures, women using contraception are perceived as "loose" women or women who are likely to cheat on their husbands. As a result, both the women and her husband might object to its use

understand how racism interacts with the population debate. The history of eugenics in the population establishment, with its clearly racist overtones, is well documented. The eugenics movement was begun by Francis Galton, a cousin of Darwin. As a social Darwinist, he believed that "survival of the fittest" is the mechanism by which superior societies evolve from lower ones. The high correlation found between "genius," social class, and race led eugenicists to become concerned over both the high fertility of the lower classes and the "race suicide" of superior Anglo-Saxons (Hodgson, 1991: 10). Thus, Galton and other eugenicists combined the ideas of Darwin with those of Malthus and advocated "selective breeding" to prevent deterioration of the race (Mies, 1987: 328).

Early activists in the birth control movement used the notion of eugenics in their bid to increase the availability of family planning methods. Over time, birth controllers moved closer to the eugenicists while they also grew closer to population control. Both organizationally and individually, eugenicists became population controllers from the 1930s to the late 1950s. For example, the Population Council was set up in 1952 by a leading eugenicist, Frederick Osborne. The Population Association of America, the professional association of American demographers, was established and later run by Osborne along with a number of other eugenicists (Hodgson, 1991: 2). The International Planned Parenthood Federation (IPPF), was founded by Margaret Sanger, a confirmed eugenicist, and was headquartered by the Eugenics Society Offices in London (Greer, 1984: 320; Gordon, 1974: 396-7). The Eugenics Society was known for its pioneering work in the training of "overseas nurses" in modern contraceptive methods. In 1976 the Society was taken over by Population Services International (PSI), an influential group working on family planning programmes worldwide (Greer, 1984: 310).

quit the first month, but my desire to limit the number of my kids persist (Philippines interview, 1994).

In the short run, not explaining potential side effects may increase acceptance rates, but in the long term, women who experience adverse effects which are not explained to them first will discontinue use and may discourage others from using a particular method. Discussing the lack of adequate information, Warwick (1982) explains, "the information gap left during these explanations was often filled later by client fears, rumours, and cultural explanations of health and illness" (1982: 168). A Namibian woman echoes the observation outlined by Warwick when she states: "In the first instance I was afraid to take any contraceptive because there are many bad stories about them in our community" (Namibia interview(b), 1994).

In part, the problem of poor explanations of contraceptives is related to the inadequate training of health workers. High quality services depend upon the providers' technical competence, sensitivity to the needs and concerns of each client, continuity of care and commitment to fully informed personal choice for all women. Lack of training, coupled with the incentives which providers receive may lead to health care providers being insensitive to the needs of women. For example, it has been documented that in methods which are not controlled by the user, family planning workers may administer long-acting contraceptives without the woman's consent. A woman in Namibia testified, "Two weeks after I gave birth, I was injected with Depo without being asked whether I want it or not" (Namibia interview(f), 1994). Another Namibian woman, who is now infertile, states:

I was in school in 1991 when it was found that teenage pregnancy was rocketing at our school. Our teacher and the local health workers

decided to have all menstruating girls injected with Noestril. We got the injection without being asked whether we have sexual partners or not, let alone the fact that we were not asked to consent for it (Namibia interview(i), 1994).

It has also been documented that family planning workers have refused to remove or discontinue contraceptives, such as IUDs and implants, when a woman requests (Hardon, 1992: 759). A woman in Bangladesh testified that

...when I decided to remove the Norplant, as I could not bear the health problems anymore, I went to the family planning centre and requested them to remove it. They said, "let's see what can be done," and did not remove it. I went a second time. They asked me to go back home and think about it. I went a third time and again was refused... I simply want to get rid of this, I do not know where to go for help. I have already sold chicken, ducks, etc. from my household to meet the costs of medicine. I have spent a lot of money without any result. Tell me, what can I do? (Anowar, interview by UBINIG Bangladesh, 1993).

Lack of fully informed consent to the use of method or to its continuation constitutes a grave ethical problem in the service and delivery of contraceptives. Fully informed consent should be the hallmark of any family planning programme. However, the context of population control and the drive to lower birth rates make this requirement difficult to achieve.

The Health Care Context

As the population establishment itself asserts, it is necessary to any family planning programme that it provide a full range of reproductive health services in the context of basic health care and adequate quality of care. However, there are many definitions of what reproductive health services

ought to include (see UN, 1994). The reproductive health concept "incorporates a holistic approach to prevention and treatment that centers on the person rather than on a particular part or function of the physical body" (Dixon-Meuller, 1993: 207). The ideal reproductive health programme would meet the sexual and reproductive health needs of girls and women throughout their life cycles. Services would include: fully voluntary birth control for individuals (a full range of contraceptive methods and safe abortion); services related to pregnancy (prevention and treatment of infertility, pre- and post-natal care, safe delivery, nutrition, child health and breastfeeding); STD prevention, screening, diagnosis and treatment; gynecologic care (screening and treatment of reproductive tract infections, breast and cervical cancer); sexuality and gender information, education, and counseling; health counseling and education in all services; and, referral systems for other health problems (Germain, et al, 1994 and Germain and Ordway, 1989).

Despite the need for reproductive health services, numerous population control programmes have been criticized for neglecting screening, follow-up and the overall health of women (Hartmann, 1995, Germain et al, 1994). A Namibian woman, after experiencing continuous bleeding on Noestril and then loss of menstruation for 10 months states: "I report this to the nurses who say they do not know what is wrong" (Namibia interview(b), 1994). Marinette, a Brazilian woman who was pressured to accept Norplant states that

...five days later the rods were inserted under my skin without any previous tests, any questions about my previous clinical history. Just after the implant, I started to feel really bad: I felt dizzy, my heart was accelerated and I put on weight (39 pounds). My period, which was a

normal 28 days' cycle, changed to a 45 day cycle. Menstruation would last three days, but after Norplant I would suffer during 10 days. My bleeding was almost hemorrhagic. I was very annoyed with that. I complained to a doctor, but he said the signs would disappear as soon as my body got used to the new method. He asked me to convince my friends to use Norplant as well (Souza de Faria, interview at International Public Hearing on Crimes Against Women, Cairo, 1994).

Thus, often basic health care, which must be seen as a necessary precondition to any family planning programme, is absent from population control programmes. A Kenyan nurse recently related:

I was visiting a rural health clinic and I had a headache. The contraceptives were stacked high to the ceiling but I could get no aspirin for my headache. When I looked further into this I found that there were no antibiotics or other basic medical products but contraceptives were everywhere (Kenya, personal interview, 1994).

It has been argued by some that given the choice between expanding family planning services and providing medical support, the former should prevail. The rationale for this is that the danger to women from pregnancy is greater than the danger of any contraceptive method. Such claims are misleading in that they measure the choice between the risks of pregnancy and the risk of contraception as if those are comparable and the only alternative (Spallone, 1989: 153).

Winikoff and Sullivan (1987) argue that using birth control is not a very "efficient" method of avoiding maternal death since a substantial percentage of births need to be avoided relative to the percentage of deaths averted (1987: 134). Because of the difficulties with contraceptive acceptability, continuation and failure, family planning programs would require thousands of women to enroll in order to avert even one death (Winikoff and Sullivan,

1987: 135).²⁹ If the risks of modern methods of contraception are included in this calculation, the strength of the argument is further undermined. Not surprisingly, the groups which are at the highest risk of death from pregnancy may also be at higher risk from contraceptive technology.³⁰ In short, the solution to improving maternal health is not simply in preventing births or providing women with unsafe contraception, but rests in the improvement of health and in increased health services to women.

The quality of care within the context of both basic health care and reproductive health is of increasing concern. While increased attention is being paid to issues of quality of care, as yet, there is little systematic improvement (Germain et al, 1994: 35). In fact, while the rhetoric around quality of care has gained currency with mainstream population actors (see for example Huezo and Briggs, 1992), the concepts around that care have been given significantly different meanings for women's health advocates and for family planning policy makers (see Table 1).

Until the quality of care improves in a way which is meaningful for women, progress in the delivery of family planning services will be stalled.

²⁹ Suggesting that family planning will prevent maternal death rests on the assumption that offering contraception to women will convince those women in high-risk groups to use the technology. This assumption may be faulty since it is unlikely that family planning coverage will be as high as would be required to have a significant effect on the number of pregnancies and births in certain high risk groups. For example, first pregnancies and births to mothers under the age of 20 are considered especially risky (Winikoff and Sullivan, 1987: 136). However, in many societies, it would be culturally unacceptable to try to avoid or postpone the first birth after marriage. Further, in order for contraception to be effective in averting the risks of pregnancy, women must not only accept but continue to use contraception effectively over a long period of time. The rate of continuation of modern contraceptives is, in many instances, very low (Winikoff and Sullivan, 1987: 136). And finally, the assumption that modern contraception reduces health risks does not take into account the large scale problem of contraceptive failure.

³⁰ In fact, in certain situations, the number of lives lost to pregnancy prevention may be close to the numbers lost to traditional maternal mortality. See Sachs et al who note that this is the case in the U.S. (Sachs, et al., 1982: 247; cited in Winikoff and Sullivan, 1989).

Struggles over the interpretations of quality of care epitomizes debates over population control in the context of contraceptive service and delivery.

Table 1 - Interpretations of Quality of Care Concepts

CONCEPT	WOMEN'S HEALTH ADVOCATES	FAMILY PLANNING POLICY MAKERS
Information	Education Advantages and disadvantages of methods	Motivation Advantages of methods
Scope of Services	Sexual and reproductive health	Contraception; sometimes abortion
Counseling	Client-provider dialogue	Persuasion
Choices	All methods Provide safe abortion	"Modern" methods Prevent abortion
Outcome measures	Contraceptive continuation Client satisfaction	Method continuation Long-acting methods
Follow-up	Provide information, routine care, support for switching methods	Manage complications

Source: Marcelo and Germain 1994.

Coercion

Any family planning programme which claims to be voluntary must have freedom from pressure and coercion, including incentives and disincentives, enforced production targets and quotas and piecework incentives for implementers. However, the power imbalance between men and women, between women and health care providers, and between the

state and its people can lead to the problem of coercion in the use of modern contraceptive technologies. Certain types of contraceptive technologies have the effect of making coercion in family planning programmes easier to implement. While coercion is possible with all methods, it is easier to physically force a person to use certain contraceptives, such as long-acting, provider-controlled methods, than, for example, barrier methods.

The principle of human rights and voluntary choice in reproductive behaviour is enshrined in both the WPPA and in the Cairo document. However, many population control programmes have depended upon manipulation, deception and even coercion since, until the socio-economic conditions make fewer children desirable, people have little motivation to restrict family size. Coercion means "the act of physical force or the threat of severe deprivation to bring individuals or couples to carry out actions of fertility control they do not want or normally would not perform" (Warwick, 1991: 28). Some examples of direct coercion in family planning programmes include the mass sterilizations of Puerto Rican women,³¹ the vasectomy camps in India,³² and the abuses that resulted from China's one-child policy.³³

³¹ In which one third of Puerto Rican women of childbearing age were sterilized with the support of the U.S. government. Many of the women did not know that the operation was irreversible and many who "chose" sterilization did so in the absence of other forms of birth control being made available to them (Kabeer, 1992: 12).

³² During the 1975-76 "emergency" under the late Prime Minister Indira Gandhi, vasectomy camps - temporary mobile field hospitals preceded by intensive publicity campaigns - were set up. The central government put pressure on family planning workers to meet sterilization quotas and police raids were used to round up 'eligible' men for forcible sterilization (Warick, 1985: 8).

³³ Between 1979 and 1985 in particular, measures taken to implement the one child policy included fines for "unauthorized" children, compulsory sterilization of one spouse after a second child was born, mandatory use of intra-uterine devices with attendant monitoring to ensure it had not been removed, and forced abortion. It is also believed to have created an increase in female infanticide (Kabeer, 1992: 12).

Other population control programmes have been criticized for using incentives and disincentives, which may blur the line between persuasion and coercion. For example, in Bangladesh women are offered Saris, food, and/or money just before the harvest when many women are especially desperate. Nevertheless, the World Bank (1984) has recommended such programmes to complement voluntary family planning services: "Incentives and disincentives give individuals a choice. They provide direct and voluntary trade-offs between the number of children and possible rewards or penalties" (1984: 123).

Incentive systems, where communities are rewarded or penalized according to whether they reach targets of acceptors, and where bonuses or penalties are given to field implementers for their recruitment of users (Ross and Isaacs, 1988), are also subject to the charge that such programmes act coercively. In many countries, family planning responsibilities have been assigned to doctors, nurses and social workers. As a result, medical attention has been withheld from women unless they accepted the family planning methods recommended (Warwick, 1991: 27). In the Philippines, for example, one woman testified that,

if you are regularly availing the "family planning program" ...you and your children would be put in the list of priority in case there would be a ration (kind of a gift) coming from the City government during Christmas season or whenever the area was hit by calamities. Also for check-ups when there is a free community clinic. If you were not availing the program for any other reason you would be placed in a last priority (Philippines interview, 1994).

As demographers John and Pat Caldwell caution, "No program with targets can be completely free of coercion" (Caldwell and Caldwell, 1982: 52).

While it is essential that family planning programmes be free from coercive practices, it is also important to understand that freedom of choice requires freedom from violence and coercion in other areas of life. In other words, a truly comprehensive reproductive health programme requires a transformation of the power relation in the family, the community and the society. As Dixon-Mueller (1993) insists, "reproductive health is related both ideologically and programmatically to these broader human rights goals; indeed, it is subsumed by them" (1993: 204). Thus, a feminist reproductive health programme means empowering women to overcome oppression. This oppression is often manifested in the violence perpetrated against women in society (Armstrong, 1994: 35). When the reason for the use of contraceptives is to prevent pregnancy in the case of rape, women cannot be said to be exercising true reproductive freedom. This is not an uncommon situation as suggested by the testimony provided by a Namibian woman who, when asked about her partner's involvement in her decision to use a particular contraceptive, states: "Actually I didn't have a boyfriend at that time. I took Noestril because there were many cases of rape in our community so in case it happen to me I don't become pregnant" (Namibia interview(c), 1994).

In order to empower women to overcome their oppression and to establish women-centred reproductive health programmes, it is essential to build on the experiences of women. This means that reproductive health programmes planned for female clientele would be designed by and for women. Involving representatives of the women who would use them in their design will ensure that reproductive health programmes are informed

by women's perceptions of their own needs and priorities (Dixon-Mueller, 1994: 205). Services which are adapted to the specific needs of the women they serve would recognize the varied circumstances of those women's lives. Thus, the centrality of childbirth to women's security and self-esteem as well as the economic conditions under which women make childbearing decisions would be taken into account. Thus, in some cases, family planning may rank low in importance for women. Only if all of these things are taken into account would a family planning service truly meet the needs of those who are its intended beneficiaries.

A feminist conception of reproductive services and delivery is necessary in order for women (and men) to receive care which enhances their health, as well as provides them with the ability to control their lives in the area of reproduction. However, appropriate delivery of contraceptives alone is not sufficient for women to gain control over their reproductive lives. As shown in these stories, women face problems of contraceptive service and delivery as a result of population control policies. Despite the lack of appropriate back-up health services, long-acting, provider-controlled methods of birth control are pushed, sometimes coercively, on women; male responsibility for birth control is ignored, and safer natural, traditional and barrier methods are not encouraged in these programmes. The problems and biases found in family planning services and delivery are reflected in biases which can be seen in the development of new methods of contraceptives.

As shown in the testimonials, the context of population control makes it difficult for family planning services to be delivered to women in ways which fulfil their needs. The kinds of technologies which the women are using are also fraught with problems, particularly given the context in which they are delivered and used. Like service and delivery, contraceptive

development is not framed with the needs of women in mind. As a result, problems with the contraceptive technologies themselves further exacerbate the difficulties faced by women subject to population control programmes. Nevertheless, the population control establishment has effectively maintained the discourse and continues to assert the position that population control policies are pursued in the interest of women. The ability of the population establishment to perpetuate the population control discourse results from a number of interests which legitimate and strengthen its own institutional structure and the discourse it represents. In the following section, I examine some of the factors which act to keep population discourse mainstream.

Factors Influencing the Dominant Discourse

It is important to ask how the population establishment has maintained the dominant population control discourse despite challenges. In the case of population, I argue that the definition of the problem and its causes, the proposed solutions, and the belief that these solutions benefit women, despite competing claims by those women subject to such "solutions," are profoundly influenced by numerous factors which encourage the acceptance of this "truth" over others. In this section, I explore how three factors -- racism, security interests of the north and profit motivation -- help to legitimate the discourse perpetuated by the population establishment.

Racism/Eugenics

In attempting to understand how the dominant discourse around population is maintained despite competing views, it is necessary to

understand how racism interacts with the population debate. The history of eugenics in the population establishment, with its clearly racist overtones, is well documented. The eugenics movement was begun by Francis Galton, a cousin of Darwin. As a social Darwinist, he believed that "survival of the fittest" is the mechanism by which superior societies evolve from lower ones. The high correlation found between "genius," social class, and race led eugenicists to become concerned over both the high fertility of the lower classes and the "race suicide" of superior Anglo-Saxons (Hodgson, 1991: 10). Thus, Galton and other eugenicists combined the ideas of Darwin with those of Malthus and advocated "selective breeding" to prevent deterioration of the race (Mies, 1987: 328).

Early activists in the birth control movement used the notion of eugenics in their bid to increase the availability of family planning methods. Over time, birth controllers moved closer to the eugenicists while they also grew closer to population control. Both organizationally and individually, eugenicists became population controllers from the 1930s to the late 1950s. For example, the Population Council was set up in 1952 by a leading eugenicist, Frederick Osborne. The Population Association of America, the professional association of American demographers, was established and later run by Osborne along with a number of other eugenicists (Hodgson, 1991: 2). The International Planned Parenthood Federation (IPPF), was founded by Margaret Sanger, a confirmed eugenicist, and was headquartered by the Eugenics Society Offices in London (Greer, 1984: 320; Gordon, 1974: 396-7). The Eugenics Society was known for its pioneering work in the training of "overseas nurses" in modern contraceptive methods. In 1976 the Society was taken over by Population Services International (PSI), an influential group working on family planning programmes worldwide (Greer, 1984: 310).

While the eugenicist belief in the superiority of the Caucasian race makes clear the history of racism implicit in early population control programmes, population control could never be anything more than a poor substitute for the science of eugenics. Population control focused only on the issue of quantity, and thus did not address explicitly the eugenic interest in improving the human gene pool (Kevles, 1985: 259). Nevertheless, eugenics was clearly implicated in the evolving racism within the US, "directed against whatever group was the most truculent subject of, and hence threat to, white world supremacy" (Gordon, 1976: 395).

It was a natural progression for population control and eugenics to extend to issues of immigration, since "attempting to curtail their expansion from within was the simplest extension of a eugenics policy" (Greer, 1984: 319). Fear of excessive immigration continues to be an important area of consensus for population control advocates. Recently, on the front page of Canada's national newspaper, The Globe and Mail, the headline ran *Population Crisis Feared As Billions Enter Fertile Years: Failing to address impact on immigration may be the "ultimate global blunder."* The story builds on fears that North America will be overrun with people from other nations. In the article, Werner Fornos, President of the Population Institute which advocates family planning efforts worldwide warns that "No amount of guns or fences or soldiers...will stop the hungry masses of the Southern Hemisphere from reaching the United States" (The Globe and Mail, 1995, A1). Such statements make clear the connection between population control and racism. Fornos is quoted as saying that "Family planning is one of the best cures for the immigration problem" (The Globe and Mail, 1995, A1). Thus immigration restriction is combined with "negative" eugenics (inducing the

"inferior" to reduce their fertility) as the core movement in the bid for population control.

Closely associated with this movement is the advocacy of "positive" eugenics (which include increasing the fertility of the genetically "superior"). New reproductive technologies (NRTs) which aim to increase women's fertility are generally only available to wealthy, white, western women. Farida Akhter of Bangladesh has pointed out the irony that "enormous resources are being spent on research into technologies that increase the fertility of the affluent in the North, while in the South enormous resources are being spent on controlling the fertility of the poor" (quoted in Gillespie, 1994: 19).

Thus, both NRTs in the North and coercive population control policies in the South amount to the same thing: a "brave new world" where quality control is applied to human beings. Such technological developments are, thereby, used to eliminate whomever the dominant social order determines to be "undesirable." The assumption that social problems can be solved through controls on breeding, feeds racist fears in society. Such fears allow beliefs about the necessity of population control to appear self-evident, thus, effectively suspending appropriate dialogue and debate on these issues.

Security

An important issue, which has profoundly shaped the discourse around population control, is that of security. Developed countries, and the United States in particular, have demonstrated an interest in limiting population growth in the developing world. The reason for this desire is simply there is a "clear relation between size of population and national power" (Morgenthau, 1993: 140). This relation is significant because since the "power of one nation is always relative to the power of others, the relative

size of the population of countries competing for power and, especially, the relative rate of their growth deserve careful attention" (Morgenthau, 1993: 141).

When asking the question, "Why do people want power," Samuel Huntington (1993) suggests a number of possible motivations. In particular, he argues that power "enables an actor to shape his (sic) environment so as to reflect his (sic) interests" (1993: 69). Further, he suggests that power

...enables a state to protect its security and prevent, deflect or defeat threats to that security. It also enables a state to promote its values among other people and to shape the international environment so as to reflect its values (Huntington, 1993: 69-70).

The fear that growing populations may exert more influence, thereby preventing developed countries from perpetuating their values may be all the more disturbing to developed nations when they realize that their own populations are declining. Ben Wattenberg (1987) in The Birth Dearth popularizes the fears of Western nations that their values will not survive:

What is happening is this: For about a decade and a half now the peoples of the nations of the free, modern, industrial world -- that includes us in the U.S. -- *have not borne enough children to reproduce themselves over an extended period of time.* We had a Baby Boom. Now there is a Birth Dearth...I believe further -- perhaps most importantly -- that the Birth Dearth may well turn out to be of great harm to the broadest value we treasure; it will make it difficult to promote and defend liberty in the Western nations and in the rest of a modernizing world....We have lived through an era of free-falling fertility in the modern democratic world. The key question it yields may well be this: *Over time, will Western values prevail?* (1987: 7-8)

While part of the concern for maintaining power is a question of values, perhaps of greater concern to the US is military power. The concern over military security due to larger population growth in developing

countries has two, conflicting manifestations. The first is based on the belief that economic insecurity stems from large populations, which then breed conflict. This belief was first popularized in 1977 by Dr. R.T. Ravenholt, director of USAID's population activities throughout the 1970s and 1980s. He argued that "...if population proceeds unchecked it will cause such terrible economic conditions abroad that revolutions will ensue, and revolutions are scarcely ever beneficial to the interests of the US" (Greer, 1984: 295).

More recently, the work of Thomas Homer-Dixon (1994) continues to make the connection between conflict and population increases. Homer-Dixon links population growth and environmental scarcity which, he argues, lead to civil strife and a weakened state (Homer-Dixon, 1994: 11-14). This work was recently sensationalized in an influential *Atlantic Monthly* article entitled "The Coming Anarchy" in which the author warned of the violence which the "surging populations" of the South are capable (Kaplan, 1994: 58). This article, and the work of Homer-Dixon, plays into the imagination of the liberal psyche and the collective belief of the US security establishment. This belief has coalesced around the argument that countries with large populations are better able to build large military forces and dominate local (and even international) conflicts (Information Project for Africa, 1993: 18).

A series of studies commissioned by the Office of the Director of Net Assessment at the United States Department of Defense makes clear the US security establishment's concern that population growth will lead to expanded military power for other nations.

One of the most important issues in the years ahead will be the extent to which demographic developments are likely to affect the size and composition of military establishments around the world. On the whole, demographic factors will produce completely different concerns in the developed world than in the developing world. Declining

fertility rates will make it increasingly difficult for the United States and its North Atlantic Treaty Organization (NATO) allies and the Soviet Union and its Warsaw Pact allies alike to maintain military forces at current levels. In contrast, exceptionally high fertility rates in most LDCs, if not matched by a commensurate growth of jobs, could lead to expanded military establishments in affected countries as a productive alternative to unemployment. In other words, where labor forces are significantly under-employed, military establishments may have a built-in momentum to capitalize on unused manpower for purposes of both internal and external security (Foster et al., 1989: 6).³⁴

This fear is echoed in a recent article in *Foreign Affairs* which suggests that "North-North" strategic concerns will no longer be the most important security issues. Rather, the author argues, with the rise in Southern populations of Africa, the Middle East, Central Asia and the Indian subcontinent, all of which have "volatile admixtures of acute poverty, demographic explosion and political instability" (Lellouche, 1993: 123-224), the North will now be the target of Southern military might. As a result, governments of the North, particularly the US, have made demographics a part of national security policy (CBC: 1994: 28).

Concern over military might due to population growth may simply be the newest "scapegoat and enemy, a substitute for the Evil Empire" (Hartmann, 1995: 150), in other words, another attempt to galvanize interests into coalitions behind certain policies. Whatever the case, there is also an increasing realization among the world powers that, with the end of the Cold War, military force alone will no longer be the principal criterion of power (Lellouche, 1993: 122). Huntington (1993) suggests that in the future most conflicts of interest between nations will be over economic issues (1993: 71). Thus, population size differentials between developed and developing

³⁴ A note appearing with the above text explains that the article is a summary, some parts inserted verbatim, from a longer report prepared for the Commission on Integrated Long-Term Strategy, under the Director of Net Assessment, Department of Defence, USA

countries are believed to be more and more significant. In countries where there are growing populations, for example, the domestic demand for natural resources will affect their price on the international market. As a United States Department of Defense study cautions,

...looming resource constraints demand heightened levels of prescience by the United States in its handling of global affairs. It is appropriate, therefore, even if somewhat daunting, to look once again into the future -- perhaps to the end of the first decade of the next century -- to ascertain how important population matters might be to the security interests of the United States (Foster, et al., 1989: 5).

Kishore Mahbubani, the deputy secretary of Singapore's Foreign Ministry, recently affirmed the importance of economic security when he pointed to a "siege mentality" in the West, affirming that "power is shifting among civilizations" (quoted in Kennedy and Connelly, 1994: 76). Mahbubani indicated that the demographic difference between North and South will lead to the economic decline of the West. "The West," he suggests, "is bringing about its relative decline by its own hand," in other words, the low fertility rate in the West could be the basis for its relative decline in power. He goes on to suggest that, "it is probably still premature to predict when China will overtake the United States as the world's largest economy but it is undeniable that a shift in material power toward Asia is under way" (quoted in Kennedy and Connelly, 1994: 76). Such claims, while certainly controversial, help to substantiate the growing belief that the North has a security interest in lowering the population of Southern countries.

These various security interests of the North, real or perceived, ensure that population growth in the South continues to be pursued as a significant problem. The US government in particular has vigorously pursued population control policies. The economic interests of the North in

continuing the rhetoric of overpopulation, however, go further than concerns over the global economic order, since the North also stands to profit financially from a crisis mentality in the field of population.

Profit Interests

Those members of the population establishment which promote modern contraceptives as the best means of family limitation may not have interests congruent with those of developing countries which adopt these policies or those individuals which receive such services. Profit motivation cannot be ignored as a significant factor in perpetuating the dominant discourse around population. The rationale which suggests that modern contraceptives are the best way to achieve fertility reduction, besides ignoring evidence to the contrary, also ignores the profit interests at work in encouraging this form of "development."

There are strong connections between aid-giving institutions and the pharmaceutical companies which produce contraceptives. Cary LaCheen (1986) outlined a number of instances of individuals serving on the board of directors for population organizations who were also closely associated with the contraceptive producing pharmaceutical industry. For example, Dr. William Hubbard, the President of the Upjohn Company (which manufactures "Depo Provera") sat on the Board of Directors for Family Health International, an organization based in North Carolina which conducts research on new contraceptives (1986: 99). The connections between the population establishment and the pharmaceutical industry are particularly strong in the US, where the pharmaceutical companies are effective government lobbyists.

Such connections are significant and there is no evidence that they are declining. Population control programmes represent an important market for pharmaceutical companies. Although US consumers still constitute an important market for contraceptive use, the growth market lies in the developing world. In the period between 1960 and 1965 there were some 31 million contraceptive users worldwide. In 1994, there were an estimated 446 million, 399 million of whom were using modern methods (UNFPA, 1993b: 7). Since the early 1970s, USAID has spent an average of \$15 million annually on birth control pills alone (Hartmann, 1995: 177). Pharmaceutical companies have a clear profit interest in selling contraceptives to women in Third World countries as well as to aid agencies.

The primary goal of the contraceptive industry, like all industries, is to maximize profits by selling contraceptives to the largest number of people. Such profit incentives may deter pharmaceutical companies from being overly concerned about the health risks of their products (not to mention cultural suitability or the user's needs). There have been numerous charges brought against these companies for "dumping" in Third World markets. Dumping, in this context, refers to the process of getting rid of products, which have either been banned or not approved for sale in the industrialized country in which they were manufactured, by exporting them to Third World countries (Sarahadi, 1993: 31).

It has been documented that this dumping has been aided by international population agencies. For example, the population office of the Agency for International Development (USAID) purchased for distribution in the Third World hundreds of cartons of unsterilized intrauterine devices (IUDs) known as the Dalkon Shield. This birth control device, which itself can cause uterine infections, blood poisoning, perforation of the uterus and

spontaneous abortion in pregnant women, was sold to AID at 48 per cent discount because of its unsterile condition (Ehrenreich, 1979: 28).

There are further accounts of the dumping of other IUD's, expired oral contraceptives and mass quantities of high-estrogen oral contraceptives.³⁵ Further, the sale of "Depo Provera," an injectable contraceptive (which has been shown to cause malignant tumors in animal studies), has been widely used in internationally-sponsored population control programmes, including social marketing programmes (Sarahadi, 1993: 31). In contraceptive social marketing programmes, international aid agencies can reach markets which would be too expensive for pharmaceutical companies to tap into.

Much of the lobbying effort in the United States of both population organizations and pharmaceutical companies is aimed at encouraging the government to increase expenditures on contraceptive research. While the government subsidizes organizations which conduct contraceptive research, most contraceptive research is conducted by publicly-funded institutions. Private firms often incorporate contraceptive research conducted by these institutions into their own products and research activities. Thus, the companies benefit from access to public research funds and the public institutions (which include such notables as the internationally funded Population Council and the World Health Organization) benefit because they do not have the industrial capacity to manufacture the products themselves.

In order to maintain this profitable connection, industry officials lobby the US Congress on the need for population control aid while also providing significant donations to support population control organizations (Hartmann, 1995: 178). More importantly, industry officials and their

³⁵ Higher estrogen content in oral contraceptives has been associated with increased health risks (Seaman and Seaman, 1977, 120).

representatives protect their market shares by lobbying on the severity of the population "crisis," and its attendant solution -- family planning -- in the form of their particular products. Thus, profit interests are significant in influencing the maintenance of the mainstream discourse.

In summary, racism, the perception of northern security interests and profit interests are three important factors which serve to legitimate population control discourse. These interests serve the population establishment by leading to increased pressure and resources aimed at defining the discourse around population in such a way that population is viewed as a crisis requiring international solutions, and that solution continues to be seen to be family planning programmes.

Conclusion

In this chapter, I described the actors which are most involved in perpetuating the dominant discourse around population control. I also demonstrated, through the testimonials of women directly experiencing population control programmes, that there is resistance to this discourse. Finally, I have examined some of the factors which serve to legitimate and strengthen both the population establishment and the discourse it maintains. In short, the provision of modern contraceptives continues to be seen as the solution which will help liberate women while at the same time reducing birth rates. This solution is recommended as the best means of relieving pressures on the global environment and economy. While this may be viewed as a rather crude appraisal of a sophisticated argument, it is important not to lose sight of this understanding, since this is the basis of the population control discourse.

That this discourse has maintained itself despite criticism from both academics and activists attests to the power of the discourse and the strong interests at work in maintaining it. Population control has led to the inappropriate delivery of modern contraceptives and to the research and development of contraceptive technologies which are antithetical to the interests of the users of those contraceptives, particularly women. In the next chapter, I examine one such technology, the contraceptive "vaccine," in order to make clear the links between population control and contraceptive development and to highlight the problematic nature of this kind of contraceptive research.

Chapter 5

"A Grave and Unnecessary Risk."

The Contraceptive "Vaccine" and the Politics of Population Control

Introduction

Contraceptive "vaccines" or, perhaps more appropriately, immunological contraceptives³⁶ are at various stages of development and are being hailed as the perfect solution to "overpopulation" because they can be delivered cheaply and easily to women in the developing world. In this chapter, I examine the contraceptive "vaccine," in order to demonstrate that research and development of modern contraceptives is biased as a result of the political discourse of population control. This situation ensures that contraceptives being developed will be inappropriate for women's needs. Through this case study, I show that ideology affects not only the construction of the problem or the means to address it, but actually shapes the technology that is to be the means.

³⁶ Immunological contraceptives have been called "vaccines" because, like other vaccines, they are administered by injection and work with the immune system. However, the anti-fertility "vaccines" work very differently from disease prevention vaccines, and this comparison obscures the profound differences between the two types of immunological devices. However, Swatija Paranjape and Chayanika Shah have commented:

We continue to call it the "antifertility vaccine" and not "immunological contraceptives." We feel that the basic assumption behind the development of this contraceptive is an understanding of fertility as a disease - a communicable one at that! It is considered to be an epidemic in the context of the poor, marginalized women all over the world. The name that they [the researchers] have given highlights their mentality in producing it and we, who are against developing any such method of contraceptive, should not be giving them a term under whose garb their real motives can be hidden (cited in Richter, 1994: 226)

In this paper, while I use the terms immunological contraceptives, and immuno-contraceptives, I also continue to refer to anti-fertility "vaccine," in quotations, in order to highlight the difficulties with the term

I begin by describing the anti-fertility "vaccine" in some detail. Next, I discuss the discourse around the development of the "vaccine" to demonstrate its links to the discourse of population control. Finally, I assess the acceptability of immunological contraceptives based on their health impacts, their presumed advantage over other methods and their potential for abuse, all of which call into question the rationality for continuing this research.

The Anti-Fertility "Vaccine"

The possibility of using the immune system for fertility regulation has been recognized for several decades (Ada and Griffin, 1991: xv; Nash et al, 1980: 328; Thompson, 1941: 588). The concept of a "vaccine" which would prevent pregnancy rests on the long held knowledge that humans can mount an immune response to human spermatozoa.³⁷ As well, more recent research has shown that some types of infertility in both men and women are associated with the presence of anti-sperm antibodies (Birke, 1988: 30). As a result of these findings, researchers have demonstrated that antifertility effects may be possible through immunization against substances specific to the reproductive system.³⁸

A number of immunological contraceptives, aimed mostly at women, but also for men, are now being tested in clinical trials. They are directed

³⁷ Immune responses are based on the classic antibody-antigen response. Antibodies are proteins (called immunoglobulins) produced by the body during an immune response. An antigen is any substance capable of reacting with antibodies. Antibodies are specific for one antigen and can build an antigen-antibody complex, thus neutralizing the antigen.

³⁸ The goal of the researchers has been to find an antigen which is: a) essential to the reproductive process; b) restricted to the intended target; and, c) the target antigen should not be continuously present in the vaccine recipient, but only intermittently and/or at low concentrations.

against reproductive hormones, the egg, the sperm, or the embryo. Immunological contraceptives are different from disease prevention vaccines, which are directed against "foreign" micro-organisms, in that the anti-pregnancy "vaccines" are directed against "self" or "self-like" molecules.³⁹ In a normally functioning body, self antigens do not produce an antibody reaction, and thus antigens (for example, proteins) that are specific to reproductive processes do not cause any immunological interference with reproduction. However, it is possible to alter such self antigens so that the body does not recognize them as "self" but as "foreign" proteins, thereby causing antibodies to be produced. This effect is achieved by attaching the molecule which the body recognizes as its own to a foreign "carrier." Thus, for example, some of the anti-pregnancy "vaccines" currently being developed use diphtheria or tetanus toxoids to "trick" the body into identifying the molecules which normally would be recognized as foreign. When such an antigen is detected by the body, the antibodies produced by the vaccine will "combine with the antigen, immunologically inhibiting and neutralizing its biological action" (Harper, 1983: 131).

Immunological contraceptives directed against the pregnancy hormone hCG (human chorionic gonadotrophin)⁴⁰ are most advanced in the research phase and are thus most likely to be the first to reach the market. For this reason, I focus my attention on the development of this particular "vaccine." HCG is secreted by the early embryo and stimulates the ovary to produce

³⁹ A self-like molecule is one which structurally resembles a molecule and which is part of the person's own molecules

⁴⁰ The hCG is a glycoprotein thought to be responsible for the maintenance of the corpus luteum of pregnancy at the time of and just after implantation of the fertilized ovum in the uterus. HCG is released by the fertilized egg soon after fertilization and continues to be produced by the placenta. It stimulates the corpus luteum in the ovary to continue to produce progesterone

progesterone. Without hCG, progesterone levels drop and the lining of the uterus cannot be maintained in its thickened state. The embryo therefore cannot attach itself to the uterus, making pregnancy impossible.

Several different hCG preparations have been developed by teams of researchers, and have reached the phase of clinical trials (i.e., testing on humans). The two most advanced research centres into the hCG vaccine are: the World Health Organization's Special Programme of Research, Development, and Research Training in Human Reproduction (WHO/HRP) project headed by Dr. Vernon Stevens; and, the National Institute of Immunology, India project headed by Dr. Pran Talwar.

While there has been a great deal of excitement generated in the medical and scientific community about the development of immunological contraceptives, the method is fraught with serious problems and health risks which call into question the rationality of continuing such research. As Graham Dukes, a pharmacologist and World Bank advisor on pharmaceuticals states:

Years ago, when I myself was working in endocrinological research, vaccination ideas like this were raised and promptly dismissed as unethical and dangerous; I do not think the balance of argument has changed, except that the threat has come closer, and people are now actually being exposed (Dukes, 1991, quoted in HAI, 1994: 1)

The question which I attempt to answer in this chapter is why this research continues despite the documented difficulties with the method. My answer is that the objective for this research is demographically driven, meaning that it is seen as a means of changing population patterns rather than of improving family planning choices. The continued research of this contraceptive and the rationale for its development are based on the goals

articulated by the population establishment, that is, the belief that a single contraceptive can solve the problems associated with overpopulation. As demonstrated in an analysis of the discourse surrounding the research in its earlier phase of development, the "vaccine" was developed as a result of population control objectives. However, while this rationale for the development of the "vaccine" is clear, as a result of criticism from women's health advocates, the population control intention is now denied in the literature. In more recent literature, the focus has shifted to issues of women's reproductive rights, choice and empowerment. This shift in language around the rationale behind the contraceptive "vaccine," a shift which closely mirrors the shift in the mainstream population control discourse, does not change the problems which are inherent in the contraceptive and which are the result of the original intention of the "vaccine." As such, defending the "vaccine" on the basis of women's right to choose is simply rhetoric and not reflective of the negative impact of the vaccine.

In the next section, I analyze the discourse around the development of the vaccine which was articulated at the earlier phases of development. I then compare this to more recent accounts by developers and funders of the vaccine which focus more on issues of "choice" and empowerment of women.

Vaccine Discourse

The anti-fertility "vaccine" has received positive attention as a breakthrough in immunology and contraceptive research (Birke, 1988; Anderson and Alexander, 1983; Barricklow, 1993). The medical excitement

over such a "novel" approach has encouraged the continued development of immunological contraceptives, despite the unsatisfactory results thus far and the potential problems of the method. At an International Symposium on Research on the Regulation of Human Fertility, Warren Jones (1986) cautions:

The regulation of a non life-threatening physiological process such as reproduction, by immunological manipulation, represents a totally new area in immunology and reproductive biology. It would be irresponsible not to be slightly overawed by such an approach. (1986: 41).

Such awe reflects the importance in the research community of a search for methods which will provide researchers with prestige, funding, and intellectual challenge resulting from breakthroughs in the immunology of reproduction.

In large part, however, the excitement generated by this medical "breakthrough" owes much to the perceived necessity of such a contraceptive for the purposes of population control as it does to scientific interest. This approach to contraception has been hailed as the solution to Third World population control problems. Dr. Pran Talwar, who heads the National Institute of Immunology (NII) research team which has done the most extensive testing on human subjects, clearly views the vaccine as the solution to population problems. Dr. Talwar says that he began working on the anti-fertility "vaccine" "because he wanted to do something to ease the burden of overpopulation in his homeland" (cited in Barricklow, 1993: 29).

Dr. Vernon Stevens, the leading researcher for the World Health Organization's Human Reproduction Project (WHO/HRP), states in an article on the vaccine that "research conducted during the past decade has brought

us to the threshold of making a new method for more effectively meeting the challenge of ever-increasing global population expansion" (Stevens, 1986: 374).

In 1989, the World Health Organization convened a symposium entitled *Assessing the Safety and Efficacy of Vaccines to Regulate Fertility*. In the closing address of this symposium, the Chair, N.A. Mitchison, while admitting that his views were "personal," states:

Foremost in my mind during these discussions was our difficulty in assessing the urgency of the demographic crisis. To the extent that the impact of the crisis increases, the need for more effective family planning technologies must increase. At the very least, failure to develop something that may provide a more effective technology would be to take a grave and unnecessary risk (Mitchison, 1991: 250).

The regressive tendencies of this kind of thinking are obvious in more mainstream scientific journals where, for example, Carl Djerassi, the chemist who produced the first orally active progestogen, norethisterone, suggests that the anti-fertility "vaccine" is a "revolutionary development" in that it would "radically change our perception of human fertility if teenage males or females, or both, were vaccinated so that they would be infertile until a conscious step was taken to achieve fertility" (Djerassi, 1989: 359). Such thinking is not based on respect for health, bodily integrity and informed choice, but on extreme notions of population control which utilize coercion to meet socially controlled ends.

Just as this kind of thinking about population control has been criticized by women's health activists and others (see Chapter 3), so too, criticism has mounted about the vaccine itself. In particular, a coalition of women's groups launched a campaign in 1990, referred to as the "Call for a

Stop" in which they criticize the continued research of the "vaccine." As a result of such criticism, the language around the rationale for the "vaccine" has shifted away from population control rhetoric. Rather, the language of women's health activists has been co-opted by those researching and funding the vaccine, both to re-describe the rationale for the "vaccine's" development and to vilify those who criticize its continued development.

This shift in language is evident in papers published in medical journals in which the rationale for the development of the vaccine has changed from a focus on population control objectives to expanding women's choice (see for example, Griffin et al, 1994). This co-optation of language is demonstrated most clearly by an examination of a series of letters received by the Women's Global Network for Reproductive Rights, which coordinates the "Call for a Stop" campaign, from the funders and researchers of immunological contraceptives.

Researchers and funders responded to letters sent by Beatrijs Stamerding at the coordinating office of the "Call for a Stop" campaign. In these letters of response, they defended the continued research of the "vaccine" based on two main arguments: the importance of choice; and, the fact that there had been dialogue with women activists.⁴¹ First, most of the researchers and funders argued that there is a limited choice of currently available methods for women and that women are not content with these choices (letters from WHO, 1994; National Institute of Child Health and Human Development, 1994; USAID, 1994; Population Council, 1994 to Stamerding). Further, they suggest that there is an unmet need for

⁴¹ I would like to thank Annette Will at Buko Pharmacampagne in Germany both for providing me with copies of these letters and for succinctly summarizing the arguments contained in them.

contraceptives, particularly medium/long term contraceptives. Yet, suggesting that they will broaden women's contraceptive choices by adding one more method is a dubious claim.⁴²

Second, the letters argue that an important dialogue has been established between the researchers and funders of the "vaccine" and women's health activists (letter from WHO to Stamerding, 1994). From this dialogue, the researchers and funders suggest that they have "found common ground with women's health activists" (letter from Population Council, to Stamerding, 1994, letter). Most of the references to dialogues with women's activists are based on a meeting held between scientists and women's health activists on the "vaccine." At this meeting, women's health activists specifically expressed concern that their attendance at that meeting would be used "to legitimize both the content and the process of research..." about which they had serious doubts (UNDP et al, 1993: 28). Nevertheless, this meeting continues to be used to discredit those activists opposing the vaccine, many of whom attended the meeting. Just as in population control discourse, the discourse of resistance to the contraceptive "vaccine," articulated by women's health activists, has been "captured" by those advocating the mainstream discourse. Thus, the language of women's health activists is used as a means of legitimating the dominant position.

These letters also assert that those women's health activists arguing against the continuation of "vaccine" research are themselves depriving women of freedom of choice because they are restricting choice to the currently available methods (letter from WHO to Stamerding, 1994). They further suggest that those campaigning against the "vaccine" used ... "alarmist

⁴² See Donald Warwick (1982) for a critique of methodology used to assess "unmet need." Also see Ruth Dixon-Mueller and Adrienne Germaine (1992) for further critique of "unmet need."

speculation, technical and scientific inaccuracies, and distortions of the facts" (letter from WHO to Stamerding, 1994). Finally, those supporting the campaign against the "vaccine" are said to "...deprive people of the freedom to choose a safe and effective method of family planning that they may want to use" (letter from WHO to Stamerding, 1994). Thus, women's health activists who question the safety of the "vaccine" and the direction which this research is taking have been accused of denying women's choice and abusing women by restricting that choice.

Overall then, the language in the immunological contraceptive development literature has shifted away from an explicitly population control rationale for the "vaccine." The developers of this contraceptive now claim to be the champions of women's choice, defending women against those arguing that "vaccine" research should be curtailed.⁴³

It might be argued that such a shift in language is a positive step since it shows that researchers and funders are hearing the voices of women and taking those voices into account in thinking about population and contraceptive research. While I argue that this shift in language is not a positive step since, in fact, the rationale has not changed, I think it would be cynical to suggest that the researchers and funders have "nefarious" purposes in mind. In fact, the letters mentioned above are striking in their sincerity. Nevertheless, the true insidiousness of the co-optation of health activist and feminist language, on both the population control and "vaccine" issue, are succinctly summed up by Debra Lewis who writes that attempts

...to co-opt women's issues may not reflect a conscious, organized attempt to trick women, but rather a process of accommodating or

⁴³ See also argument by Madeline Ward in the *Ottawa Citizen*, June 28, 1995, "Foes of anti-fertility vaccine betray oppressed women," and response July 28, 1995.

adapting women's demands in a way that does not challenge or disrupt fundamental economic and social relationships (Lewis, 1988: 97).

The "normalization" of a reverse discourse once again occurs as the funders and researchers of immunological contraceptives are willing to change the way they talk about the "vaccine," but are unwilling to address the underlying problems with the discourse. Since it is merely adjustment without change, the underlying problems remain. Despite this shift in language around why the "vaccine" is being developed, its original intentions continue to shape the kind of technology which is developed. Thus, as Chetley (1995) suggests, "researchers continue to focus mainly on hormonal or provider-dependant methods to be used by women, while alternatives are largely rejected" (1995: 153). In the following section, I assess the problems with the vaccine in order to demonstrate that this shift in language has had little effect on the problems inherent in the technology.

Assessing the "Dream"

I think it would be a boon to our family planning programme if such a vaccine was introduced with all the safety precautions, I think the population of India will then be brought under control very fast - I think that would be a dream (Dr. Karande in Schatz and Schneider, 1991).

Despite the belief that the "vaccine" is the answer to a "dream," in order for research on the immunological contraceptives to continue, it is necessary to show that they are safe and that the rationale for the research meets international ethical standards. To that end, it is necessary to analyze a number of issues, including:

whether there is sufficient evidence to demonstrate that the contraceptive is safe, reversible and effective;

whether decisions to continue research of the "vaccine" are ethical; and,

whether the social and political aspects of the design of immunological contraceptive are appropriate.

Following analysis of these issues, I conclude, first, that the safety of the "vaccine" is in question, and that it is, currently, neither effective nor reversible. Second, that international ethical standards may not justify continued research. Finally, that the potential for abuse of this method makes it inappropriate in the current global political climate.

Risks of Harmful Effects

When examining any contraceptive the most important question is whether it is safe and reliable. As discussed earlier, far more contraceptive research dollars have gone to an assessment of efficacy than safety. While claims have been made that the "vaccine" is "100 per cent safe," clearly, there are many outstanding safety concerns. Further, there are issues concerning the "vaccine's" efficacy, reversibility and appropriateness. These issues will be explored in this section.

Cross Reaction with Other Molecules in the Body

One of the most often cited dangers associated with the use of immunological contraceptives is the possibility of cross reaction with other molecules (see Jayaraman, 1986; Berger, 1987; Stevens, 1986; Griffin and Jones, 1991; Anderson and Alexander, 1983). What this means is that antibodies

directed against hCG could also attack other hormones or molecules. The cross reactions which have already been identified could affect the menstrual cycle and thyroid function and might damage the pituitary and thyroid gland. In particular, the hCG "vaccine" being developed by the National Institute of Immunology in New Delhi uses a part of the hCG molecule (the beta subunit) which is structurally similar to the human Leutenizing Hormone (hLH). This hLH hormone, secreted by the pituitary gland, is necessary for maintaining normal menstrual cycles and is involved in the process of ovulation. It is feared that a "vaccine" which cross reacts with hLH could inhibit ovulation, create menstrual disturbance, and provoke long term problems caused by auto-immunity in the pituitary gland, the organ which produces hLH (UNDP et al, 1993: 17). Further, there is a possibility of cross reaction with currently unidentified substances in the body.

In attempting to avoid the problem of cross reaction, the WHO/HRP researchers have identified a smaller part of the beta subunit of hCG which would not cross react with hLH. As an article in the influential journal *Nature* argues, "All other nonspecific vaccines have to be regarded with skepticism until their safety is clearly proven bearing in mind that they will eventually be applied to millions of people" (Berger, 1987: 648). However, while other "vaccines," like that found in the WHO study, are being developed which do not cross react with hLH, some of these "vaccines" using smaller parts of the hCG hormone have been seen to cross react with sections of the pancreas (UNDP, 1993: 48). Further, there have recently been findings which suggest that the pituitary gland and certain types of lung cancers may also secrete hCG (Ada and Griffin, 1991: 129). It is not known if there are other elements in the body which also secrete hCG. The essential requirement that any molecule used for an immunological contraceptive be specific to

pregnancy or, at least, to the reproductive system, would then seem to make any hCG research inappropriate.

Effects on immune system

One of the greatest concerns regarding cross reactivity, referred to above, is that the unintentional development of an immune response against body structures, other than the intended target, could elicit auto-immune disease. Auto-immune disorders occur where there is "an excessive or inappropriate response to self antigens" (Ada and Griffin, 1991: 77). Women are more likely to develop auto-immune diseases than are men (Schrater, 1992: 44). While symptoms can sometimes be treated, there are no known cures for any of the immune disorders such as lupus, rheumatoid arthritis, diabetes and myasthenia gravis, and no tests to predict who is at risk. As pointed out by Ada (1990), "vaccines to control human fertility in theory run a higher risk of inducing anti-self reactions compared with vaccines to control infectious diseases, and the risk may be greater still if powerful adjuvants are used and the vaccine is administered frequently" (Ada, 1990: 576).

Recent studies of animal subjects and clinical trials in the WHO anti-fertility vaccines show some immune reaction to pancreatic cells. These reactions are a signal that other body organs are the subject of immune attacks. Thus, Basten et al (1991) warn that,

...a vaccine designed to immunize against a self antigen (such as the hCG vaccine), should not be administered to patients with preexisting auto-immune disease or with a family history of such disease. Possible consequences could be inadvertent exacerbation of a preexisting auto-immune disease, or an excessive response to the vaccine resulting in irreversible infertility (1991: 78).

However, it is extremely difficult to screen for these problems since the fact that antibodies are produced, does not mean that auto immune disease will necessarily follow (Griffin and Jones, 1991: 186).

Immune complex diseases are another concern raised in relation to immunological contraceptives. Immune complex diseases are caused when the antigen-antibody complexes are inefficiently removed from the body and deposited in smaller blood vessels where they cause inflammatory damage. Immune complex diseases can result in effects ranging from lesions around the injection site to kidney damage. "Vaccines" directed against plentiful reproductive antigens increases the risk of immune complex diseases (Anderson and Alexander, 1983: 568). Further, where pre-existing protein carriers, such as tetanus and diphtheria, are used and where repeat injections are necessary, the risk is further increased (Rose et al, 1991: 134).

Allergic reactions occur when there is an excessive or inappropriate immune response to foreign antigens (Basten et al, 1991: 77). Allergic reactions can range from a localized reaction at the injection site to more generalized reaction including rare but potentially fatal cases of anaphylactic shock. In particular, the use of a diphtheria toxoid carrier for the hCG "vaccine" has induced a large number of allergic reactions and is "almost certainly too high to be considered for wide scale clinical use" (HRP, 1988: 187).

Scientists who have noted the problem have suggested that "it will be necessary to screen individuals [with a diphtheria skin test] with this simple test before repeat vaccination." (Jones et al, 1988: 1297-98). However, Richter (1993) points out the impracticability of such testing in most family planning settings (1993: 38). Given that such testing takes approximately 48 hours, this adds an additional complication to the use of the "vaccine." These

complications arise both in terms of the health care system and out of the difficulty in many developing countries for women to secure access to a health care facility for various reasons, such as geographical location and time constraints. Nevertheless, such testing is absolutely necessary since "although most allergic responses simply cause discomfort, in rare instances, they can be fatal" (Schrater, 1992: 44).

All of the above effects can be seen in healthy persons. However, there are additional safety concerns for those who already have an immune system disorder or whose immune system is not fully functioning due to disease. Richter (1993) identifies four areas of risk, including: the exacerbation of pre-existing allergies or auto-immune disease; the possibility that the vaccine may act as a trigger to those with a genetic predisposition to allergies or auto-immune reactions; the development of chronic liver disease in carriers of hepatitis B (jaundice);⁴⁴ and, the increased speed at which HIV infection may develop into full blown AIDS and the possibility that the vaccine will be ineffective in those with HIV/AIDS (1993: 39).

While these problems are hypothetical since only healthy, carefully screened individuals have been subjects in clinical trials, researchers have indicated that all of the above pre-conditions should always be considered contraindications to the use of immunological contraceptives. In other words, no one with these conditions should ever use immunological contraceptives. Some of these conditions, however, are difficult or impossible to screen for, and the likelihood that such screening will occur in routine family planning clinics, particularly in developing countries, is low. Health care systems simply could not afford to test for things like HIV/AIDS, hepatitis B,

⁴⁴ In many developing countries, the incidence of hepatitis B is high. For example, in Thailand, 10 per cent of the population has the disease (Richter, 1993: 39)

pregnancy, and allergic response before administration of the vaccine (Richter, 1993: 39-40)

Effects on Fetus

Concerns have been raised about the negative health effects of the "vaccine" on fetal development. A number of potential problems were identified at a meeting convened by the World Health Organization's Human Reproduction Project (WHO/HRP) in 1989 including miscarriage, visible malformation and less apparent hormonal abnormalities (Report, 1991: 270). During fetal development, the fetus' own immune system develops and learns to differentiate between its own body components and foreign agents. It is not known whether interference with a woman's immune system at this time could negatively affect the fetus (Richter, 1993: 82).⁴⁵ Further, the experience of fetal exposure to DES (diethylstilbestrol) before birth which created abnormalities of the reproductive organs (including cancer), not detected until puberty, raises questions about the adequacy of short term safety trials (Smyke, 1991: 129).

Reversibility

After receiving the contraceptive "vaccine," a woman could suffer from side effects, become pregnant or choose to become pregnant. At present, there is no way of reversing the effects of the "vaccine" once it has been

⁴⁵ Thus far, evidence from animal studies has not been sufficient to establish safety to the developing fetus of some of the vaccines being tested. In the WHO trials, no baboon or primate tests were conducted before the vaccine was tested in Sweden on fertile women (HAI, 1994:2). However, Jones and Beale (1991) state that the "use of standard tests in small animals is irrelevant for testing for possible immunoteratological effects [birth defects caused by immunity] of a vaccine" (1991:156)

activated. Dr. Talwar of the National Institute of Immunology, in response to the concerns of women health activists, argues that when a woman wants to become pregnant, an "injection of progestational steroid, such as medarvy progesterone, can be provided" (Talwar, 1994: 701). Despite this claim, to date, no studies have been conducted which have tested whether this hypothetical method of reversibility is in fact possible, and there are serious questions about the safety of such an approach for the fetus.

Also, while the use of progesterone could potentially reverse the *effect* of the "vaccine" (namely, a woman may be able to become pregnant or continue a pregnancy), it cannot reverse the *response* to the "vaccine." In other words, once the antibodies have been produced there is nothing that can be done to reverse the immune response itself. As a result, if a woman experiences side effects, there is no way to stop these effects until the vaccine wears off.

Effectiveness

Probably the greatest criticism which can be levelled against the "vaccine" is that it does not work. Numerous researchers have identified the poor efficacy record of immunological contraceptives as a significant obstacle to their development (Ada and Griffin, 1991: 8; Anderson and Alexander, 1983: 567). With vaccinations against disease, efficacy is related to a number of factors. However, it is not necessary to reach 100 per cent effectiveness rates because the population as a whole will be protected if the disease is contained. With contraceptives, however, each individual must be protected at least at the level of alternative methods of birth control.⁴⁶ There are three stages in

⁴⁶ If, however, the intention of the "vaccine" is for use in mass immunization programmes, as has been suggested, then individual needs become wholly irrelevant

which the "vaccine" can be ineffective: the lag phase, the waning phase and the plateau phase.

First, the nature of immune response means that it takes a certain interval of time before the contraceptive reaches an effective level (Richter, 1993: 30). This is known as the "lag phase." The length of time required for the antibody levels to reach the appropriate level varies from about five weeks to four months. Thus, additional methods of birth control will always be required during this time.

Second, the "waning phase" occurs when the immunological contraceptive wears off. When the "vaccine" wears off, a booster is given to increase the level of antibodies, thus, the time at which the antibody levels will drop needs to be predicted exactly. As a result, a testing system would be required to ensure that women know when they need to get a booster or use additional protection.

Third, the time at which the antibody levels are high enough to ensure protection, known as the "plateau phase," varies in duration and effectiveness such that some women may never reach the threshold of effectiveness at all, while others could be permanently sterile. Immune responses vary based on genetics, health and psychic well-being and environmental factors (Richter, 1993: 32). In the Indian phase II clinical trials, 20 per cent of the participants were excluded from the trials because they never reached the threshold antibody levels. Low immune response may also be due to an impaired immune system caused by infection, malnutrition, stress or drug use. Thus the immune response could potentially fluctuate during the plateau phase when a woman thinks she is protected.

As outline above, use of the "vaccine" involves considerable risks and potentially harmful effects. It also is not reversible and has questionable

efficacy. Given these problems, many of which are inherent to the "vaccine" and therefore cannot be "perfected," it is difficult to imagine why research on the vaccine has progressed this far. The research and development of contraceptives, and all other medical research, is governed by ethical standards which are meant to provide guidelines for decisions about contraceptive research. In the next section, I show that the "vaccine" research does not meet these standards and should be curtailed.

The Helsinki Declaration and the Contraceptive "Vaccine"

A number of organizations have drafted international ethical guidelines which must be followed whenever biomedical research is conducted which involves human subjects. One of the most recent and influential guidelines was prepared by the Council for International Organizations of Medical Sciences (CIOMS) in collaboration with the World Health Organization (WHO), known as the "World Medical Association Declaration of Helsinki." These guidelines state that in research on human subjects, "the interest of science and society should never take precedence over considerations related to the well being of the subject" (CIOMS, 1993:50). Further, the declaration indicates that there is a fundamental difference between medical research which is purely scientific and does not benefit the subject and research which has some therapeutic benefit to the subject. Thus, there is an added dimension of ethical responsibility in the conduct of trials of contraceptives (Jones and Beale, 1991: 51).

One of the most important principles outlined in the "Helsinki Declaration" is that the "potential benefits, hazards and discomforts of a new method should be weighed against the advantages of the best current diagnostic and therapeutic methods" (CIOMS, 1993: 49). In other words, when

testing on human subjects, there must be some benefit to the subject of such a method *over existing methods*.

Women and men require a range of contraceptive options to meet their individual needs, cultural preferences, health requirements, and priorities based on age, parity and availability of health services, including access to safe abortions (Richter, 1993: 26). A variety of contraceptive methods currently exist. If a new contraceptive is proposed, it should have some advantage over other methods and should, at least, be as effective and as safe as those existing methods. If a contraceptive does not confer any advantage, then it is a waste of money and resources and its development exposes people participating in clinical trials to unnecessary risk.

It is unlikely that the "vaccine" will ever reach the effectiveness rates of even the so-called ineffective barrier methods, such as the condom and the diaphragm. I have already established that the safety and efficacy of contraceptive vaccines are below what can be found in other methods. Nevertheless, contraceptive researchers continue to assert that the "vaccine" has significant advantages over other methods. In the next section, I argue that it does not offer any advantage over existing methods and, as such, I question the ethics of continuing research on immunological contraceptives.

Advantages Attributed to the "Vaccine"

In the literature, the benefits which have been attributed to the "vaccine" include: expanded choice for women; lack of pharmacological activity and, therefore, side effects; long lasting effect; low manufacturing cost; and, ease of delivery. I examine each of these claims to assess their validity,

concluding that the negative impact of the "vaccine," as well as the general lack of benefits, cannot justify the continued development of this method.

Expanded Choice for Women

The benefit most often cited in the literature on the contraceptive "vaccine," particularly in the more recent literature on the subject, is that the "vaccine" will "enormously improve the scope of contraceptive choice for women" (Werker, 1995: 5; see also, Talwar, 1994; Barricklow, 1993; UNDP et al, 1992; Griffin and Jones, 1991; Alexander, 1992). This notion of expanded choice is based in part on the belief that there is an "unmet need" for contraception in the developing world. However, women's health advocates at the 1992 WHO meeting on Fertility Regulating Vaccines argued that simply increasing the methods available does not automatically lead to expanded choice. In particular, in many programmes in developing countries, the concern with demographic targets and clinical interest has led to a bias towards long-acting, provider-controlled methods (like the "vaccine") at the expense of other, safer, user-controlled methods. For example, there has been a persistent lack of availability of condoms in Africa and of condoms and diaphragms in Latin America. The development of immunological contraceptives is not likely to improve the situation for women in developing countries.

Further, as mentioned earlier, the whole concept of "choice" must be called into question, since the choice of which contraceptive is developed is certainly not in the hands of those who will be the eventual users of that contraceptive. In particular, the population establishment has had a significant voice in decisions regarding which contraceptives are being developed and are, in fact, those responsible for developing the new

contraceptives. Warren Jones (1986) for example, notes that it is not women who have identified a gap in the choice available, but suggests that the "...need to develop a new and unique contraceptive technology has stemmed from a middle-ground of bureaucratic opinion" (1986:41). The population establishment have been significant actors in shaping such opinion, particularly in the area of contraceptive research.

No Pharmacological Effects or Side Effects

Many authors have argued that one of the principal benefits of the "vaccine" is that, unlike hormonal methods such as the Pill, Depo Provera or Norplant, immunological contraceptives do not have any pharmacological effects and therefore does not have the side effects normally associated with these methods (Stevens, 1986; Barricklow, 1993; Talwar, 1994; Werker, 1995). In particular, rationale for the development of immunological contraceptives has been based on the notion that the "vaccine" would not produce the menstrual irregularities and metabolic side-effects associated with hormonal methods. Rosemary Thau, director of contraceptive development at the Population Council, suggests that "with Norplant, as with a number of other progesterone-based contraceptives like the pill, you can have irregular bleeding and ammenorhea...The vaccine hasn't shown any adverse effect" (cited in Barricklow, 1993: 29).

The advantages of the "vaccine" based on the belief that it does not affect menstrual patterns results from the comparison of the "vaccine" to hormonal methods only. Within this comparison, it is certainly an advantage. However, it is no improvement over methods, such as barrier methods, which do not affect the hormonal system. Additionally, this advantage does not apply to any of the "vaccines" being developed which

cross react with the human Leutenizing Hormone (hLH). Further, avoiding menstrual cycle disturbance does not translate directly into no "adverse effects," since there are likely to be adverse effects associated with the immune system.

The concern over menstrual irregularities expressed by anti-fertility "vaccine" researchers is ironic given that, traditionally, the medical establishment has been extremely reluctant to acknowledge the impact of these irregularities on women's lives (see Hardon, 1992). Particularly in relation to Norplant, many researchers have maintained that the problems associated with irregular bleeding are not "medically harmful" (Richter, 1993: 50). Such assertions are based on assessments of blood loss and haemoglobin levels rather than on the long term impact on women's health and lives. While more research has uncovered the negative long term effects of hormonal methods (see Seaman and Seaman, 1977), this should be viewed not as a reason for development of the "vaccine," but as a warning that "immunological methods have a potential for unpredictable long-term effects because a complex body system is being manipulated" (Richter, 1993: 50).

Long Lasting Effect

As I have already argued, to date the effectiveness of the contraceptive "vaccine" has been questionable. Researchers posited that one of the principal advantages of an immunological contraceptive was that "it would be long-lasting from a single application" (Stevens, 1986:369). Despite evidence to the contrary, the notion that the "vaccine" is "highly effective" continues to be asserted (Werker, 1995: 5).

The "vaccine" is being developed based on the assumption that it will last from one to two years. However, extreme variability of response has

meant that these assumptions have not been borne out. The Phase II clinical trials of the NII vaccine, which has undergone the most extensive testing, showed wide variations in duration of effect. Only 60% of the women entering the trials maintained antibody levels beyond three months (UNDP et al, 1993: 19). A recent report by Talwar et al. (1994) has shown that, after the three initial injections, on average, the vaccine required boosters at three month intervals in order to maintain efficacy. All of these efficacy rates are calculated on the basis of antibody levels. However, it is not yet possible to determine if these antibody levels will be effective enough in the prevention of pregnancy, meaning that real protection may be much shorter than anticipated (UNDP et al, 1993: 19).

Women's groups have also questioned whether the long-acting characteristic should be considered advantageous and a rationale for research at all. In particular, questions have been raised concerning whom such a contraceptive would benefit, particularly given the potential for abuse which such a method would present in population control programmes. Long-acting, provider-controlled methods, such as the contraceptive Norplant and, theoretically, immunological contraceptives, are much more open to abuse. Norplant, for example, which has been used extensively in population control programmes, particularly in Asia, has reportedly not been removed to the satisfaction of users (Hardon, 1992: 760). Further, this abuse is not restricted to developing countries. In the US, at least one judge has made the insertion of Norplant a condition of a woman's sentence (Henley, 1993: 753). Given that no surgery is required for immunological contraceptives, the potential for the method to be used in coercive ways or without women's consent is even higher. As Concepcion et al (1991) warn, "The advantage of

being long lasting will be a problem instead of an advantage if the vaccine is given without the woman's informed consent" (1991:239).

As claims about advantages of the method based on its long-lasting effect become problematic given the current knowledge and research, researchers have found ways to turn this problem to their advantage. The criticism leveled by women's groups concerning the abuse potential of a long-lasting method have allowed researchers to change their arguments about the duration of immunological contraceptives. For example, the Population Council states that "since the vaccines that are currently being tested have a duration of effectiveness of less than one year, they are less likely to be open to abuse than sterilization or other longer-acting contraceptives" (letter from Catley-Carlson to Stamerding, 1994). Or, "It is recognized that the use of these products might possibly be misused by governments or individuals if the duration of vaccine effects is very long-lasting, but we believe that a product with a protection period of only 6 months will greatly reduce the potential for such misuse and, in practice, neutralize it" (Apton Corporation, 1995: 3).

Low Cost

One rationale for the development of immunological contraceptives is that they would be "relatively inexpensive to produce and deliver" (UNDP et al, 1993: 13). The predictions about cost are based on the estimated low cost of the components, the fact that the marketed product will only be given periodically, the long shelf life of the "vaccine," and its ease of storage at room temperature (UNDP et al, 1993:24). To date, the prediction of low cost is still theoretical since the "vaccine" which is in the furthest phase of development

is not considered commercially viable because of the labour-intensive way it is produced (Barricklow, 1993: 29).⁴⁷

Critics question whether the "vaccine's" cost would ever be as low as hoped since its cost will be mediated by the risks associated with its use. The need for women to return to a health care provider at annual intervals in order for immune status to be checked, the cost of liability insurance which could cause an increase in price, and the unacknowledged cost of long term health problems should be factored into the cost of immunological contraceptives. There are also other uncalculated medical costs associated with the "vaccine" such as the requirement for boosters, the need to provide a test kit to check antibody levels, and the need to adequately screen for contraindications, including the costs of testing for HIV, hepatitis B, and allergic reaction. It is also necessary to consider the costs associated with training, long-term follow up, and adequate medical care.

Finally, the issues of affordability and cost of development need to be considered. The cost of coverage occurs at once rather than being spaced out over each month (as with the pill), or by usage (as with the condom). As such, many women will be unable to afford the outlay of cost at a single time, even if, overall, the contraceptive is less expensive. This problem with affordability has been an issue with the contraceptive Norplant (Richter, 1993: 51). Further, the low cost of the method does not take into account the high cost of development of new contraceptives which come from public sources (Richter, 1993: 52). For example, agencies such as the World Health Organization and USAID's contraceptive research programme are currently

⁴⁷ There is some research being done to develop a genetically engineered version "made with a synthetic hCG that could be administered in one dose and would be cheap to produce" (Barricklow, 1993: 29), however, this is still some time away.

investing between 14 and 17 per cent of their contraceptive development budget on research in immunological contraceptives (UNDP et al., 1992: Annex 4). Thus, while the costs of the "vaccine" are unknown at present, they are likely to be high if all the aspects of their cost are considered.

Ease of Delivery

Ease of delivery as a rationale for the development of immunological contraceptives is well documented in the literature (Jones, 1986; Stevens, 1986; Ada and Griffin, 1991; Werker, 1992; Barricklow, 1993). There are two aspects to this argument, first, that it is easier to deliver within the health care setting, and second, that it will be easier to deliver to women because it is more acceptable to them.

It is argued that the "vaccine's" administration method makes it easy to deliver in the health care system because it is "associated with positive health benefits" (Richter, 1993: 51). Jones (1986) for example, argues that the major advantages of the vaccine relate to delivery, including the fact that

...[the] vaccine principle is well established in developing countries and should form the basis for a ready acceptance of immunological contraception. Furthermore, effective national programmes for vaccination and the evaluation of effectiveness are already organized and operating in many areas of developing countries, and it is possible that a fertility control vaccine could be administered through the national public health networks (1986: 44-45).

While the use of vaccine programmes and the vaccines' image to the public could have applications in terms of the provider perspective, it also highlights a number of concerns about the anti-fertility "vaccine." In particular, there are three related risks associated with the image of immunological contraceptives as "vaccines." First is the risk that there will be

misinformation about the "vaccine" if it is believed to work in the same way as an infectious disease vaccine. The second risk is the potential for abuse of immunological contraceptives were they to be provided without the user's knowledge, particularly in the context of population control programmes. It was recently reported that in Indonesia, tetanus shots, which are required before a marriage licence will be issued, were being switched with the injectable contraceptive Depo Provera (Adrina, Indonesian Health, personal communication, 1994). And, third, there is the issue of the possible negative impact on participation in vaccination programmes. Concepcion et al (1991) warn that "abuse of the birth control vaccine would not only harm family planning in general but it could also have negative consequences for public attitudes to other vaccines and to the health care system in general" (1991: 240).

It is also argued that in areas where health care followup and services are difficult, this method will be particularly appropriate. The idea that immunological contraceptives are appropriate for mass delivery is extremely misguided. First, methods which are long acting and not reversible on demand require more careful delivery and attention to counselling than user-controlled, fully reversible methods. In fact, delivery is complex for a number of reasons. Some of those problems, as previously indicated, include: the need for additional protection in the lag phase; the need for blood tests to establish effective antibody levels; the need to test and screen for contraindications; the concern about possible health problems resulting from the vaccine, including the unknown consequences to the child if a woman becomes pregnant, all of which are exacerbated by the shortage of adequate health care facilities. Thus, the "vaccine's" delivery in health care settings is fraught with problems.

It is further believed that the "vaccine" will be easy for health care providers to deliver to women, particularly in the Third World, due to a number of "acceptability" factors. These factors include: that the contraceptive will be easy to use; that there will be low risk of patient failure; that the method is not associated with sexual intercourse; and, that the women can avoid telling her partner or family that she is using a contraceptive.

The first two of these factors are overly optimistic. First, as I have already suggested, the "vaccine" may not be as easy to use as has been hoped. Currently, there are three initial shots required, followed by boosters at three month intervals. Antibody levels must be checked at appropriate intervals and an alternative method of contraception must be used during the lag phase. Second, while it is true that there is a low risk of patient failure, that risk is currently greater than the risk of all barrier methods of contraception on the market. In other words, even with user failure of barrier methods, something which can be improved with appropriate education, the "vaccine" is still less effective than any of these methods.

Immunological contraceptives are not intercourse-related which is appealing to many women. Most modern developers of contraceptive methods have sought, by design, to separate sexuality from contraception. While contraception being separated from sexuality does increase women's sexual availability, "whether this is positive or negative depends upon the mutuality of a couple's sexuality needs and preferences" (Bruce, 1987: 36). Further, many modern methods of contraception which are not intercourse-related impinge on women's sexual freedom in other ways by creating unpredictable bleeding patterns, pain, or discharge. Thus, many non-coitus related methods do have an impact on sexuality. Pollack (1985) has argued that contraceptive technologies

...are developed from a particular perspective, emphasizing the sexual enjoyment of men and underestimating the costs to women. Male sexual pleasure is the most significant factor taken into account in the methods which become available, and in the ways in which contraceptives are used (1985: 76).

Finally, the nature of the "vaccine" as non-coitus related does not provide much benefit over other methods since most methods currently available are, in fact, not directly related to intercourse, including some existing, and potential, barrier methods.

Further, the contraceptive "vaccine" is non-detectable which is an advantage to women who wish to contracept surreptitiously. There have been a number of studies documenting the importance of surreptitious contraception to women (see Bruce, 1987: 36). Because this characteristic of the "vaccine" is clearly a benefit over many (though not all) existing methods, it is used more and more as a rationale for the development of immunological contraceptives. The ability to contracept surreptitiously may be viewed by some as being of sufficient benefit to defend the ethical development of the anti-fertility "vaccine." However, before reaching this conclusion, it is important to address some of the problems associated with this characteristic.

Molyneux (1989), in her discussion of the concept of women's interests, invokes the distinction between what she terms "strategic" gender interests and "practical" gender interests. Strategic interests stem from "the analysis of [women's] subordination and from the formulation of an alternative, more satisfactory, set of arrangements from those which exist" (1989: 232). Practical gender interests, on the other hand, derive from "the concrete conditions of women's positioning...[and] are usually a response to immediate perceived need, and they do not generally entail a strategic goal such as women's

emancipation or gender equality" (1989: 233). In other words, practical needs are filled by addressing the concrete conditions in women's lives, while strategic needs are those which seek to transform the position in which women find themselves as a result of the structural inequalities inherent in their day-to-day lives.

The inequalities inherent in the power women exercise in their sexual relations makes the desire for a contraceptive "vaccine" which they can hide from their partners a realistic, practical need for women. However, fulfilling such a need does nothing to address the underlying inequalities associated with this need. Thus, by making the distinction between strategic and practical interests, we can see the tension inherent in developing a contraceptive which preserves and reinforces the inequalities in women's lives rather than using the truth of this need as a starting point for challenging such inequalities through other means.

In the final analysis, the benefits of the "vaccine" do not seem to outweigh the problems with its development. While I argue that this kind of research should be curtailed based on international ethical guidelines, I recognize that any decision about the risks and benefits of a particular contraceptive may be open for dispute. As such, it is important to show that there are other ethical issues which need to be considered beyond the technical merits of one contraceptive over another. In particular, it is crucial that there be a deeper understanding of the socio-political context in which all contraceptives are developed and in which they will be delivered. In the next section, I elaborate on the previous critique by showing that contraceptives, such as the contraceptive "'vaccine," developed in the context of population control, have a high potential for abuse which makes their development

problematic. This abuse potential needs to be more fully understood when considering the benefits of developing a particular contraceptive.

Beyond the "Helsinki Declaration:" The Population Control Context

As I have suggested, the contraceptive "vaccine" cannot be assessed in isolation from its potential societal and service delivery environments. In other words, it is not possible to assess adequately the risks and benefits of particular contraceptives without looking at how and why they are used. In the previous sections, I emphasized the fact that the decision to pursue the development of the contraceptive "vaccine" was based on the objective of lowering population growth rates. For example, Shearman, a contraceptive researcher, wrote in 1982 that immunological contraceptives would be an "antigenic weapon," against "the reproductive process, a process which left unchecked threatens to swamp the world" (Shearman, 1982). Having population control as the objective of research is reflected in the design of the contraceptive.

Different groups of contraceptive researchers around the world have been involved in what has been referred to as the "race" to develop this new class of immunological contraceptives (Jayaraman, 1986: 661). This race is seen as especially urgent because of its potential as a "solution" to overpopulation. The major institutions which are carrying out this research and are at various stages, include: The National Institute of Immunology, New Delhi, India; The World Health Organization, Geneva, Switzerland; The Population Council, New York, USA; The Contraceptive Research and Development Programme (CONRAD), Norfolk, USA; and, The National Institute for Child Health and Development (NICHD), Bethesda, USA.

A variety of organizations are funding the research into the anti-fertility "vaccine." The largest of these funders include: The World Bank; the United Nations Population Fund (UNFPA); the United Nations Development Program (UNDP); the Rockefeller Foundation, USA; the United States Agency for International Development; the International Development Research Centre, Canada; and, the governments of India, Norway, Sweden, United Kingdom and Germany (see Richter, 1993). The funders of the research all maintain an explicitly population control perspective.⁴⁸

While contraceptives have the ability to enhance the reproductive rights of women, they can equally be a barrier if women are coerced to use them or are given them without their fully informed consent. Some contraceptives are more prone to being used in these kinds of conditions. Table 2 indicates the abuse potential of a variety of contraceptives with immunological contraceptives having a high to very high potential for abuse. This potential for abuse is often discounted on the basis that other contraceptives have the same characteristics (UNDP et al, 1991: 25). That other contraceptives also have this characteristic is hardly an adequate defence of the contraceptive "vaccine." Rather, it highlights the general characteristics which can lead to abuse. As reproductive rights activist Betsy Hartmann has been quoted as saying "some methods have abuse built into their design" (cited in Richter, 1993: 44). Richter (1993) identifies three basic features which are important indicators of the abuse potential of any contraceptive: the

⁴⁸ Most of the funders are described in Chapter 4 as part of the population control establishment. While the International Development Research Centre in Canada is not listed as part of the population establishment, mainly because they no longer have a population portfolio, they continue to use population control rhetoric. For examples of this, see IDRC, 1992 and transcript of meeting between IDRC and women's health activists on June 6, 1995 (on file with author).

duration of the anti-fertility effect; the possibility or impossibility to stop at will (user control); and, the type of delivery system or device (i.e., whether it is a barrier method, pill, injectable, implant, IUD, and so on) (1993: 44).

Duration of Effect

Bruce (1987) points out that there are varying degrees of reversibility for different methods of contraception (1987: 369). Some just wear out, either at a specified time, but usually at times which vary from user to user (injectable contraceptives, for example, last between three and six months). Self-administered methods are easily reversible (barrier or oral contraceptives). Some are potentially reversible with the assistance of the provider (contraceptive implants, or intrauterine devices) and, finally, some are simply irreversible (sterilization).

With the exception of methods which are self-administered and easily reversible, all other methods have been documented as being subject to abuse. Depo Provera reportedly was used coercively in South Africa and Indonesia (see Hartmann, 1995: 206); sterilization has a long history of abuse particularly in the context of incentives given to sterilization providers and clients (see for example Bruce, 1987: 36); and, methods which are reversible with the help of a provider, such as Norplant and IUDs, have been documented as being the subject of more subtle forms of abuse of personal freedom in the form of a reluctance or a lack of preparation to remove the implant or IUD (Bruce, 1987: 37; also see Chapter 4).

Thus, immunological contraceptives could be open for abuse since they are currently not reversible, they may be irreversible, or they will depend on the provider for theoretical reversibility.

Table 2

A comparison of abuse potential of contraceptives

Method	Duration of effectiveness	Possibility to stop effect at will	Delivery system/device	Abuse potential
Barrier methods	during intercourse	can be removed by user at any time	Condoms, vaginal barrier (+ spermicide)	none
Oral hormonal contraceptives	1 day	can be stopped by women at any time	oral	low
Vaginal rings with hormones ^a	3 or 6 month	can be taken out by women at any time	vaginal slow release system	low
Injectable hormonal contraceptives	1, 2 or 3 month ^b	women must wait until the effect wears off	injection	high
Hormonal implants	5 years	can be removed at any time, but only by specially trained health workers	six capsules under the skin. Minor surgery needed for insertion and removal	high
IUDs	1 to 8 years	can be removed at any time, but only by specially trained health workers ^c	intra-uterine device, inserted and removed through the cervix	high
Immunological contraceptives ^a	potentially 1 year to lifelong	women must wait until the effect wears off	injection, oral?	high to very high

a Under development

b Return of fertility may be delayed after effect wears off

c In emergencies IUDs with a string have sometimes been removed by women themselves

Source: Richter, 1993.

User Control

Personal control is very important in determining whether a method has a potential for abuse. Integral to the design of any contraceptive is the degree to which the contraceptive is controlled by either the user or the provider. Thus, while the vaginal ring which is now being developed and the injectable contraceptive Depo Provera both last for approximately three months, the vaginal ring can be removed by the user and thus has a much lower abuse potential. Provider controlled methods of contraception "reduce patient failure" by removing a woman's responsibility for birth control. This characteristic is generally considered "advantageous to doctors and population control advocates, but its advantage to women is not an automatic corollary" (Schrater, 1992: 44). Further, as Bruce (1987) observes, the fact that men tend to predominate as highly qualified providers and women as low status users, "male/female power relations are also implicated" (Bruce, 1987: 37). Thus, it is not difficult to imagine, particularly in the current political climate, that immunological contraceptives could be given to women without their knowledge or consent.

Delivery System

The "vaccine" is meant to last from one to two years and cannot be reversed during this time. Further, the "vaccine" is not controlled by the user, but, rather, by the provider. These characteristics give the "vaccine" a high potential for abuse in comparison to most existing methods, particularly if they are administered by injection (Richter, 1993: 46). The use of injections and the comparison of immunological contraceptives with vaccination programmes, as discussed above, can also lead to abuse. As Betsy Hartmann

notes, "in many areas of the Third World, people associate injections with safe, effective, modern medicine, and are thus eager to receive them" (Hartmann, 1995: 201). The WHO admits that there is concern that there will be "risk of confusion and deliberate abuse...if immunological contraceptives were provided within vaccination programmes" (UNDP et al., 1992:13).

The potential for abuse inherent in the "vaccine" suggests the difficulty in providing this contraceptive to women in the context of population control. In fact, the "vaccine" has a much higher potential for abuse than most existing methods of contraception. As Judith Richter (1993) suggests:

Development of methods with high abuse potential can have far-reaching consequences, ranging from detrimental health impacts to erosion of civil rights. Whether actual abuse occurs depends on many factors, such as the degree of protection of human rights and the position of women within a society. In the current global political climate, we fear that abuse of contraceptives will increase (1993:48).

Conclusion

The risks to health and to the rights of women have largely been ignored in the development of the contraceptive "vaccine." An assessment of the "vaccine" makes clear that it has unacceptable health risks, is of no clear benefit over other, existing methods, and has a high potential for abuse. The only reason for its continued development is the context in which it, and other contraceptives, are being developed, namely, the rhetoric of overpopulation.

Thus, in the field of contraceptive technology, the goal of preventing pregnancy has taken precedence over safety and ethical standards. As a result, we are left with methods of contraception which are skewed in favour of long-acting, provider-controlled methods of birth control while alternative, safer methods are ignored in the research.

In the next chapter I conclude that the rhetoric of overpopulation is standing in the way of true social change and development. Only by re-conceptualizing the way population problems are posed can solutions arise which support the efforts of women and men around the world to gain meaningful control over their lives.

Chapter 6

What is Your Problem?: A Conclusion

"What is your problem?" the powerful ask the weak, once they decide that this dissatisfaction can no longer be ignored or laughed off. "Tell us what is wrong, and we will try to do something about it."

But for the weak the only honest answer may well be "Everything is wrong!"

"Oh well," say the powerful..., "if you can't tell us what the trouble is how can we do anything about it? Besides, if you can't state it clearly, it really can't be so bad."

from Powers of the Weak, Elizabeth Janeway, 1981.⁴⁹

Recognizing that "everything is wrong" is the painful first step in an intensely political process. The process of moving from this recognition to articulating the true nature of the problem requires a much deeper analysis. Often the understanding that there is something wrong stems from the lived reality of those experiencing the problem. "The grumbling of the weak are called forth by everyday experience, and they certainly begin by being incoherent, directed toward a number of apparently unrelated and superficial annoyances" (Janeway, 1981). It is the "grumbling" of women who have experienced the effects of population control which indicates the truth that, indeed, "everything is wrong." It is my belief that in acting to shift the

⁴⁹ I owe this quotation to Snow (1994)

dominant discourse through continued insistence that women's voices be heard, change is possible. It is this conviction which has inspired my thesis.

The discourse around population control has led to policies which have impacted negatively on women. There is increasing recognition that women are dissatisfied with the kind of family planning services which they are being offered. At the same time, many women still lack access to contraceptive technologies either because of their age or marital status or as a result of their geographical location. There is a growing acceptance that it is the context of population control which has adversely affected these services.

As a result of these problems, there has been an increased emphasis on women's right to choose to use reproductive technologies. However, this emphasis limits our ability to examine how social and economic forces shape the technologies themselves and how these technologies further shape choices. Neglecting to contextualize the technologies means that we implicitly constrain our role to choosing between the limited range of contraceptive technologies rather than looking at alternatives or critiquing the whole model (Wajcman, 1994: 159). In other words, it is crucial that we examine the forces which drive research forward and which restrict the development of alternative models. One gynecologist has commented that contraceptive researchers

...would do better to concentrate their resources on making the safe methods more effective....Concentrating on improving these methods is surely better than the conventional wisdom of the scientific establishment, which starts with current or innovative systemic methods which are highly effective and convenient, and then strives diligently towards making them risk-free. Success down that road will be nearly as impossible to prove as it ever will be to achieve! (Guillebaud, 1991: 293-94; cited in Chetley, 1993: 153).

The above author views the inability of contraceptive researchers to ensure that highly effective methods are safe as a lack of "success." However, the "conventional wisdom of the scientific establishment" does not take this position since its view of success or failure differs. Because contraceptive research is based on the goals of population control rather than on women's self-defined needs and wants, what is successful for contraceptive development is very much open to question. Changing the definition of what "success" in contraceptive research means is the task women face.

The message of women's health activists around the world is that women need access to quality health services and respect for reproductive rights (Garcia- Moreno and Claro, 1994: 53). Further, these services should be designed and provided with the goal of improving reproductive health and rights, not with demographic concerns in mind. Women's health activists have also fought for the recognition that women's health and empowerment should not be viewed simply as a means to reduce fertility, but are important goals in their own right (Garcia-Moreno and Claro, 1994: 53).

The importance of women's empowerment was recognized in the Cairo document. The document states that the "empowerment and autonomy of women and the improvement of their political, social, economic and health status is a highly important end in itself" (UN, 1994: 17). The recognition of empowerment as a goal in itself is an important step. However, there is no clear definition in the document of what the term "empowerment" really means. Srilatha Batliwala (1994) suggests that the term empowerment has replaced terms such as "welfare," "community participation" and "poverty alleviation" without providing a clear distinction between these terms and the term "empowerment." In defining

empowerment she notes that women need to be viewed as subjects rather than objects of social change. Further, she argues that empowerment is the "process of challenging existing power relations, and of gaining greater control over the sources of power" (1994: 130).

Batliwala (1994) goes on to suggest that, because changing power relations is a complex process, there are a number of different strategies which would be useful. Three possible strategies include economic empowerment through self-sufficiency and security, integrated development, and consciousness-raising (1994: 50). While economic security and integrated development may be necessary, increased consciousness and awareness are the most important aspects of empowerment.

Empowerment occurs when people come to understand the systemic sources of their oppression, and consequently act to change the conditions of their lives. It is a complex process, one which "...takes twists and turns, includes both resistance and consent, and ebbs and flows as groups with different relations to the structures and sources of power come into conflict" (Bookman and Morgen, 1988: 4). Meaningful social change can only come through this kind of empowerment.

This holistic strategy of empowerment, one which involves organizing and consciousness-raising, is not necessarily complementary to the mainstream view of empowerment. Because increased status of women is associated with lowered fertility, empowerment is advocated as a means of reducing women's fertility. However, this strategy is suggested in the same breath in which top-down population policies are pursued. As I have suggested, mainstream views of empowerment do not acknowledge that true empowerment for women will involve changing power relations. The power relations which keep fertility high are the same power relations which render

contraceptive services problematic and prevent technologies from changing in ways which would be beneficial to women.

Strategies which promote women's involvement in the processes of decision-making around the kinds of, and ways in which, technologies are delivered and developed will lead to true empowerment. This thesis was written in an effort to contribute to the empowerment of women by clarifying some of the connections between population control policies and the kinds of contraceptives which are offered to women.

In this thesis, I demonstrated how the population establishment maintains a discourse of population control which has a profound impact on the way contraceptive technologies are developed. I showed how feminist critiques of technology offer a theoretical base from which to understand how technologies can be shaped by societal and political forces. This understanding provides a means to situate research on contraceptive technologies within the larger context of the discourse of population control. While the discourse of population control has shifted, the essential message remains the same: that overpopulation is a major international crisis, the only solution to which is the distribution of modern contraceptive technologies. This discourse of population control, advocated by the population establishment, remains strong despite criticisms from the "users" of population control programmes. Its strength results from both the institutional structures which support it and the interests which legitimize it. The case study of the contraceptive "vaccine" provides a timely example of the way in which contraceptive technologies are being developed with the needs of population control, rather than the needs of women, in mind.

Understanding the role which technology plays in struggles around the meaning of population adds a deeper dimension to the critique of population

control. The next step should involve further research into the ways in which power relations interact with population. This research might include issues such as: how population control and medical hegemony impact on the development of technologies; how family power dynamics structure the way fertility decisions are made; the links between the rise of fertility enhancing technologies in the North and fertility limiting technologies in the South; and, the kinds of services, delivery systems, and technologies which would be more appropriate for women in various settings.

While such research is necessary, it is also crucial to advance the critique of population control by increasing the level of action-advocacy around the issue. Van Esterik (1989) notes that, "rather than directing social action, research often begets more data collection, more details, a finer analysis - more research" (1989: 214). The traditional belief that advocacy is based on research needs to be replaced with the understanding that it is through practical knowledge that theoretical insights are drawn (1989: 214). These insights, in turn, can lead to further research. As Patricia Maguire (1984) has pointed out, it is not knowledge which is the problem, but rather, an "unwillingness to use what is already known for the benefit of women or social justice. There is unwillingness to use what is known about power inequalities for the redistribution of power" (Maguire, 1984: 50).

It is these power inequities which have led to population discourse which suggests that the solution to environmental degradation and poverty can be found in a technological "magic bullet." While this suggestion may be appealing in its simplicity, by ignoring complex issues of power, it is both harmful to women and continues to perpetuate the problems. Thus, future research on the issue of population should integrate issues of social, political and economic systems. Moving towards this goal includes basing any such

research on the self-defined needs of women. As a Northern feminist doing research in the area of population and development, my role is to help explore the silences in the discourse around population control in a way which links issues of women in the North and the South. It is this vision of development which, to my mind, offers Northern and Southern feminists the possibility of acting in true solidarity so that people can say "*this* is our problem" and act for change.

Appendix One
Original Contact Letter, Letter of Permission and Question Guide for
Women's Stories

DATE

Karen Seabrooke
Inter Pares
58 Arthur St.
Ottawa, Ontario

ADDRESS

Dear XXXXX,

Greetings from Canada! I'm writing to you to follow up on the women's stories project that Women's Health Interaction (WHI) has been working on. Unfortunately, the person who was working on the project, Rita Parikh, has moved to the West Coast. In her last letter to you, I think she mentioned that we were still unsure as to how the stories were going to be used. Now that most of the stories are in, we are beginning to see the shape which the project might take.

As Rita mentioned in her letter to you, the rate of response for the stories was low and the format was not what we had expected. However, we feel that we can still use the collected stories in order to illustrate the differences between family planning in the broader sense and population control. We think this will be useful because the population control establishment often uses the argument that women want population control while what women really want (and this is beautifully illustrated in the stories) is good quality, appropriate and safe family planning information and services in the context of good quality health care. Because things have been a lot slower getting off the ground than had been anticipated, the funding for this project is in question. One of our members, Julie Delahanty, has suggested the possibility of using the women's stories in her master's thesis and, through that work, developing a framework for using the stories for animation purposes. In this way, the development of the framework by a WHI member could proceed without any additional funding being devoted to the project at this time.

I would very much appreciate hearing from you to ensure that you approve of the way in which we intend to use the story which you sent in. I think

these stories are especially valuable because of the wonderful depth the women provided. Be assured that your story will be used sensitivity and that complete confidentiality will be respected. I look forward to hearing from you soon.

In Solidarity,

Karen Seabrook

INTER PARES

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November, 1993

Dear friends,

Please find herewith a description of the Inter Pares/Women's Health Interaction project, "Women's Experiences with Reproductive Technologies Booklet".

We are asking for your assistance in helping us to document experiences of women in your country with various reproductive technologies used in population and fertility control programs. The goals for doing this are outlined in the description, as well as some suggestions about how to go about collecting these stories and documenting them.

We would hope that collecting women's stories on their reproductive health experiences will also be useful to you in your own work, as a way of illustrating and giving voice to the ways in which women's reproductive rights have been violated and abused. Our intention is to use some of the stories in a booklet form, along with fact sheets on the range of technologies that we are addressing. We also see the project as an empowering one, in that it will validate the experiences of individual women, and show the commonality of those experiences. We will circulate the booklet as widely as possible, ensuring that the privacy of the women who share their stories is protected.

If you are able to work with us on this project, we would be grateful to receive even one or two stories. We would prefer the stories to be written down, but we know that may not be possible for everyone. We would also welcome tape-recorded discussions or other forms of expression - drawings, poems, etc. The stories can be as long or as short as necessary. We would also like to receive any promotional/publicity materials that either promote population control in your country or that show women's resistance to such programs.

Our aim is to have collected all stories by the end of March, 1994, to edit them along with the fact sheets in April/May, and to have them plain-written and produced by the end of June.

We thank you for any assistance you can provide, and look forward to hearing from you.

In Solidarity,

Karen Seabrooke
Inter Pares/Women's Health Interaction

WOMEN'S EXPERIENCES WITH REPRODUCTIVE TECHNOLOGIES BOOKLET

Inter Pares and Women's Health Interaction (WHI) are working on a variety of activities leading up to the United Nations International Conference on Population and Development (ICPD) to be held in September, 1994 in Cairo. These include policy work, educational initiatives and organizing activities. They also include the production of some resources aimed at generating debate and presenting an alternative perspective on population issues. We are planning an educational kit, the production of discussion papers on various aspects of the population issue, and the creation of a booklet on women's experiences with population control programs and the technologies used in these programs.

We are seeking to collect, in whatever form possible (written, tape-recorded, drawings) a range of women's stories about their experiences with contraceptives or fertility drugs and technologies. We believe that it is essential to hear, document and share women's individual experiences with these technologies, so that we can better understand the impact of population control on the lives and health of women.

Our intention is to collect women's experiences from a range of places - in Asia, Africa, Central and South America, and Canada - and to publish these in an accessible booklet form, along with important and useful information on population control programs and fact sheets on the effects of the drugs, devices and technologies themselves. We intend to share this booklet with as many people as possible, and hope that it will be helpful for many of us in our education, organizing and policy work.

By documenting these stories we hope to achieve many valuable goals:

1. These stories are a historical documentation of women's lives, a validation of our experiences, especially concerning the choices we have and who controls the choices of women, as well as the consequences of these "choices". As well, some stories could reveal human rights violations and could be used to raise consciences about such abuses.
2. Individual women realize that they are not alone, that the problems and dilemmas they experience are often shared with women around the world.
3. We can see how drugs and devices to control our fertility impact on women differently according to race, class and country of origin.
4. We can learn from the experiences of others, gain insights about how to struggle for reproductive freedom, and become

empowered to act together.

5. Women's stories are an ideal way of providing the context of the effects and impacts of population control on women. So often population control - contraceptives and fertility manipulation - are promoted as necessary and requested by women, promoted out of the real context of women's lives; this "context stripping" is a classic example of how women's oppression and exploitation is obscured.

We are hoping that you will be able to participate in this project, in a way that also benefits the work you are doing. In case you are able to assist us, we have prepared some questions that could be asked to stimulate broad, open-ended answers. It is most powerful to use women's own words. Details provide contexts that reveal dilemmas and impacts differentially. We have to be careful not to make assumptions or take anything for granted and to be sensitive to the personal and emotional nature of this experience.

Note also that we are gathering a broad range of experiences and would like to include experiences with abortion, contraceptives, new reproductive technologies and sterilizations, etc.

Some questions are asked to help identify ideologies, beliefs about women, mothering, power structures, choice and profit-motive and may seem obscure or not obvious even to the women who have the experience (which we have found in documenting our own stories within Women's Health Interaction).

It is clear that not all questions would be asked of every woman. Also, the questions are stimulus questions only. Therefore they are not necessarily meant to be asked in this order or restricted to only these questions. Please encourage women to describe in their own words, what their experience has been and how they feel about this experience. It is often helpful to use such prompting as "Tell me more about that", or "go on..." "How did you feel when...", or "What happened next?"

Reassure the women interviewed that their stories are told in confidence and therefore their names and other related information will be changed to protect their privacy, and please ensure that you respect this as well.

We could ask such questions as the following:

1. What are (were) the reasons you want to limit (or increase) the size of your family?
 2. What contraceptive(s) or device (technology, etc.) have you had?
- (In the following questions, contraceptive can be replaced with

the appropriate technology according to the woman's experience).

3. Why did you choose this method? Who influenced you to choose this method?
4. What role does your husband/partner have in helping you to decide what contraceptive you will have?
5. What role does your religion have in helping you to decide what contraceptive you will have?
6. Could you describe the situation in which you were given the contraceptive/method? (Note that this question is attempting to capture whether there were incentives (rewards)/disincentives (penalties) offered and what kind.)
7. Were the benefits, risks (short and long term side effects, adverse effects, follow-up requirements and alternatives) explained to you fully and in a way that you could understand? How were you treated by the health authorities?
8. What effects did this method have on you physically and psychologically? Were these effects reported to the health authorities? What was their response?
9. What were the financial costs involved with this method? Could you afford it?
10. Have you used sex-selection technology? Why and in what way? What was the result?
11. Are male babies valued or treated differently than female babies? Describe by using examples.
12. What is the cultural expectation for having or not having children? (The sex and number of children to have, the marital status of mother, the responsibility for raising the children? Is a mother looked at differently than a single woman? Describe.)
13. What experiences did your mother have with the control of her fertility?
14. In your culture, what rights, choices do women have over sexual experiences within marriage, outside of marriage, and between women, young women, older women? How are these rights and choices different for men? What happens to teenagers who become pregnant?
15. In your culture, are women raped and sexually abused? How does this affect women? (What is done if a pregnancy results?) Who assumes responsibility for the consequences?

BIBLIOGRAPHY

- Abernathy, Virginia. 1994. "Optimism and Overpopulation." Atlantic Monthly. (December), 84-91.
- Ada, G.L. 1990. "Immunosafety Aspects of Fertility Control Vaccines. In Alexander, N.J. et al. (eds). 1990. Gamete Interaction: Prospects for Immuncontraceptives. Proceedings of the Third Contraceptive Research and Development (CONRAD) Program International Workshop, Cosponsored by the World Health Organization, San Carlos de Bariloche, Argentina, 26-29 November, 1989. New York: Wiley-Lyss.
- Ada, G.L. and P.D. Griffin (eds). 1991. Vaccines for Fertility Regulation: The Assessment of their Safety and Efficacy. (Proceedings of a Symposium on Assessing the Safety and Efficacy of Vaccines to Regulate Fertility, convened by the WHO Special Programme for Research, Development and Research Training in Human Reproduction, Geneva, June 1989). World Health Organization. Cambridge: Cambridge University Press.
- Alexander, Nancy J. 1992. "Contraceptive Vaccine Development: Future Prospects." In Wayne C. Koff and Howard R. Six (eds). Vaccine Research and Development, Vol 1. New York: Marcel Dekker, Inc.
- Amadiume, Ifi. 1987. Male Daughters, Female Husbands: Gender and Sex in an African Society. London: Zed Press Ltd.
- Anderson, Deborah J., and Alexander, Nancy J. 1983. "A New Look at Antifertility Vaccines." 40:(5) Fertility and Sterility, 557-571.
- Apton Corporation. 1994. "Comments Addressing Concerns About the WHO Immunocontraceptive Research Program." Unpublished paper on file with author.
- Arditti, Rita, Renate Duelli Klein, and Shelley Minden (eds). 1984. Test-tube Women. London: Routledge and Kegan Paul, Ltd.
- Armstrong, Sue. 1994. "Rape in South Africa: an Invisible Part of Apartheid's Legacy." 2:(2) Focus on Gender: Perspectives on Women and Development. An Oxfam Journal.
- Atkinson, Linda E., Richard Lincoln and Jacqueline D. Forrest. 1985. "Worldwide Trends in Funding for Contraceptive Research and Evaluation." 17:(5) Family Planning Perspectives, 202-213.
- Atwood, Margaret. 1983. Murder in the Dark. Toronto: Coach House Publishers.

- Australian Government. 1994. Independent Inquiry Report into Population and Development. Commissioned by the Australian Government, April 1994.
- Bachrach, Peter and Elihu Bergman. 1973. Power and Choice: The Formulation of American Population Policy. Lexington, MA: Lexington Books.
- Barricklow, Denise. 1993. "An Indian Institute's Breakthrough Vaccines." 2:(2) Choices: The Human Development Magazine, 28-30.
- Basten et al. 1991. "Assays for Relevant Human Immune Responses." In Ada, G.L. and Griffin, P.D. (eds.). 1991. *op cit.*, pp. 75-93.
- Batliwala, Srilatha. 1994. "The Meaning of Women's Empowerment: New Concepts from Action." In Gita Sen, Adrienne Germain and Lincoln C. Chen (eds). 1994. *op cit.*, pp. 127-138.
- Bereano, Philip, Christine Bose and Erik Arnold. 1985. "Kitchen Technology and the Liberation of Women from Housework." In Faulkner and Arnold (eds). 1985. *op cit.* pp. 162-181.
- Berger, Peter. 1987. "A Cautionary View of Antifertility Vaccines." 326 Nature, 648.
- Birke, Lynda. 1980. "From Zero to Infinity: Scientific Views of Lesbians." In Brighton Women & Science Group (eds). 1980. *op cit.* pp. 108-123.
- Birke, Lynda. 1988. "Sperm Protein Holds Key to Contraceptive Vaccine." October, 15, 1988, Science, 30.
- Bleier, Ruth (ed). 1986. Feminist Approaches to Science. New York: Pergamon Press.
- Bleier, Ruth. 1988. "A Decade of Feminist Critiques in the Natural Science." 14 Signs: Journal of Women in Culture and Society, 1-38.
- Bookman, Ann and Sandra Morgen (eds). 1988. Women and the Politics of Empowerment. Philadelphia: Temple University Press.
- Boserup, Ester. 1965. Conditions of Agricultural Growth. Chicago: Aldine.
- Boyle, Godfrey, David Elliott and Robin Roy (eds). 1977. The Politics of Technology. New York: Longman, Inc.

- Brighton Women & Science Group (eds). 1980. Alice Through the Microscope: The Power of Science over Women's Lives. London: Virago.
- Brown, Clarence W., and Edwin E. Ghiselli. 1955. Scientific Method in Psychology. Toronto: McGraw Hill Books. Inc.
- Bruce, Judith. 1987. "Users' Perspectives on Contraceptive Technology and Delivery Systems: Highlighting Some Feminist Issues." 9 Technology in Society, 359-383.
- Caldwell, John and Pat Caldwell. 1982. "Family Planning in India: A Worm's Eye View from a Rural Area in South India." 5:(1) South Asia, 51-53.
- Caldwell, John and Pat Caldwell. 1986. Limiting Population Growth and the Ford Foundation Contribution. London and Dover NH: Frances Pinter (Publishers).
- Caldwell, John C. 1982. Theory of Fertility Decline. London: Academic Press Inc. Ltd.
- Caldwell, John C. 1994. "The Course and Causes of Fertility Decline." Distinguished Lecture Series on Population and Development: International Conference on Population and Development. Belgium, International Union for the Scientific Study of Population (IUSSP).
- Camp, Sharon L. 1993. "Population: The Critical Decade." 90 Foreign Policy, 126-144.
- Canadian Women's Committee on Reproduction, Population and Development. 1994. A Canadian Women's Report on Canadian Policies and Practices in the areas of Reproduction, Population and Development.
- Cassen, Robert. 1994. "Population and Development: Old Debates, New Conclusions." In Robert Cassen (ed). 1994. Population and Development: Old Debates, New Conclusions. New Jersey: Transaction Publishers.
- CBC (Canadian Broadcasting Corporation). 1994. "The Population Riddle." Prepared by David Cayley and broadcast on *Ideas* (Toronto: CBC, 1994).
- Chetley, Andrew and Health Action International (HAI-Europe). 1993. Problem Drugs. Amsterdam: Health Action International.

- CIOMS (Council for International Organizations of Medical Sciences). 1993. In collaboration with the World Health Organization (WHO). International Ethical Guidelines for Biomedical Research Involving Human Subjects. Geneva, 1993.
- Clark, Colin. 1970. "The Economics of Population Growth and Control: A Comment." 28:(1) Review of Social Economy, 449-466.
- Clark, Colin. 1972. Population Growth: The Advantages. Santa Ana: R.L. Sassone.
- Coale, A.J. and E.M. Hoover. 1958. Population Growth and Economic Development in Low Income Countries: A Case Study in Indian Prospects. Princeton: Princeton University Press.
- Cockburn, Cynthia and Susan Ormrod. 1993. Gender and Technology in the Making. London: Sage Publications.
- Cockburn, Cynthia. 1986. "The Material of Male Power." In Feminist Review (eds). Waged Work: A Reader. London: Virago, 93-113.
- Cockburn, Cynthia. 1988. Machinery of Dominance: Women, Men, and Technical Know-How. Boston: Northeastern University Press.
- Concepcion, M. et al. 1991. "Social Aspects Related to the Introduction of a Birth Control Vaccine." In Ada G.L. and Griffin, P.D. (eds). 1991. *op.cit.*, pp. 233-246.
- Connelly, Matthew and Paul Kennedy. 1994. "Must it be the West Against the Rest?" Atlantic Monthly, (December), 61-84.
- Corea, Gena. 1980. "Depo Provera Discussion." In H.Holmes, B. Hoskins, and M. Gross (eds). Birth Control, Controlling Birth. Clifton, N.J.: The Humana Press Inc.
- Corea, Gena. 1985. The Mother Machine: Reproductive Technologies from Artificial Insemination to Artificial Wombs. New York: Harper and Row.
- Dalsimer, Marilyn and Laurie Nisonoff. 1987. "The Implications of the New Agricultural and One-Child Family Policies for Rural Chinese Women." 13:(3) Feminist Studies, 587-607.
- Daly, Mary. 1973 Beyond God the Father Boston: Beacon Press.

- Demeny, Paul. 1985. "Bucharest, Mexico City, and Beyond." 11:(1) Population and Development Review, 99-106.
- Demeny, Paul. 1994. "Population and Development." Distinguished Lecture Series on Population and Development: International Conference on Population and Development. Belgium, International Union for the Scientific Study of Population (IUSSP).
- Diamond, Irene and Lee Quinby. 1988. "Introduction." In I Diamond and L. Quinby (eds). 1988. Feminism and Foucault: Reflections on Resistance. Boston, MA: Northeastern University Press, ix-xx.
- Dixon-Mueller, Ruth and Adrienne Germain. 1992. "Stalking the Elusive 'Unmet Need' for Family Planning." 23:(5) Studies in Family Planning, 330-335.
- Dixon-Mueller, Ruth. 1993. Population Policy and Women's Rights: Transforming Reproductive Choice. Westport, Connecticut: Praeger.
- Djerassi, Carl. 1989. "The Bitter Pill." 243 Science, 356-361.
- Donaldson, Peter J. 1990. Nature Against Us: The United States and the World Population Crisis, 1965-1980. Chapel Hill and London: The University of North Carolina.
- Ehrenreich, Barbara et al. 1979. "The Charge: Genocide; The Accused: The US Government." Mother Jones, (9 Nov 1979), 26-37.
- Ehrlich, Paul. 1968. The Population Bomb. New York: Ballantine Books.
- Ehrlich, P. and A. Ehrlich. 1991. Healing the Planet: Strategies for Resolving the Environmental Crisis. Reading, MA: Addison-Wesley.
- Eisenstein, Zillah R. 1988. The Female Body and the Law. Berkley, CA: University of California Press.
- Enke, Stephen. 1969. "Birth Control for Economic Development." 164 Science, (May), 798-802.
- Enke, Stephen. 1971. "Economic Consequences of Rapid Population Growth." 81:(324) Economics Journal, 800-811.
- Faulkner, Wendy and Erik Arnold. 1985. Smothered by Invention: Technology in Women's Lives. London: Pluto Press.

- Fee, Elizabeth. 1986. "Critiques of Modern Science: The Relationship of Feminism to Other Radical Epistemologies." In Bleier, Ruth (ed). Feminist Approaches to Science, New York: Pergamon Press, 42-56.
- Findlay, Allan and Anne Findlay. 1987. Population and Development in the Third World. New York: Methuen & Co.
- Finkle, Jason L. and Barbara B. Crane. 1985. "Ideology and Politics at Mexico City: The United States at the 1984 International Conference on Population." 11:(1) Population and Development Review, 1-28.
- Firestone, Shulamith. 1970. The Dialectic of Sex: The Case for Feminist Revolution. New York: William Morrow Co.
- Foster, Gregory, D. et al. 1989. "Global Demographic Trends to the Year 2010: Implications for US Security." The Washinton Quarterly, (Spring), 5-24.
- Foucault, Michel. 1978. The History of Sexuality, Vol. I. New York: Vintage Books.
- Foucault. 1979. Discipline and Punishment: The Birth of the Prison. New York: Vintage Books.
- Foucault. 1980. Power/Knowledge. Colin Godon (ed). New York: Pantheon.
- Franklin, Ursula. 1990. The Real World of Technology: CBC Massey Lecture Series. (Toronto: CBC Enterprises).
- Fraser, Nancy. 1989. Unruly Practices: Power, Discourse and Gender in Contemporary Social Theory. Cambridge: Polity Press.
- Friere, Paulo. 1985. The Politics of Education. South Hadley, MA: Bergin and Garvey.
- Gallagher, Janet. 1987. "Prenatal Invasions and Interventions: What's Wrong with Fetal Rights." 10 Harvard Women's Law Journal, 9-58.
- Garcia-Moreno, Claudia and Amparo Claro. 1994. "Challenges from the Women's Health Movement: Women's Rights versus Population Control." In Gita Sen, et al. (eds). 1994. *op cit.* pp, 47-61.
- Germain, Adrienne, Sia Nowrojee, and Hnin Hnin Pyne. 1994.. "Setting a New Agenda: Sexual and Reproductive Health and Rights. In Sen, G. et al. (eds). 1994. *op cit.*, pp. 27-46.

- Germain, Adrienne and Jane Ordway. 1989. Population Control and Women's Health: Balancing the Scales. New York: International Women's Health Coalition.
- Gillespie, Peter D. 1994. "Policing Population: Population Control Isn't Family Planning." September The Canadian Forum, 16-23.
- Gordon, Linda. 1974. "The Politics of Population: Birth Control and the Eugenics Movement." 8:(4) Radical America, 61-98.
- Gordon, Linda. 1976. Woman's Body, Woman's Right: A Social History of Birth Control in America. New York: Grossman Publishers.
- Gouvernement du Quebec. 1993. Families and Taxation. Ministere du Revenu, Quebec.
- Government of Canada. 1994. Canada's International Population Activities. International Conference on Population and Development, Canada Report.
- Gray, Elizabeth Dodson. 1981. Green Paradise Lost. Wellesly, MA: Roundtable Press.
- Green, Cathy. 1994. "Poverty, Population and Environment: Does 'Synergism' Work for Women?" Sussex Institute of Development Studies, Discussion Paper 343.
- Greer, Germaine. 1984. Sex and Destiny: The Politics of Human Fertility. New York: Harper & Row, Publishers.
- Griffin P.D. and Jones W.R. 1991. "The Preliminary Clinical Evaluation of the Safety and Efficacy of a Fertility Regulating Vaccine." 10 Statistics in Medicine, 177-190.
- Griffin, David P., Warren R. Jones and Vernon C. Stevens. 1994. "Anti-Fertility Vaccines: Current Status and Implications for Family Planning Programmes." 3 Reproductive Health Matters, 108-113.
- Grown, Caren. 1994. "Structural Adjustment, Demographic Change and Population Policies: Some Preliminary Notes" In Isabella Bakker (ed.). The Strategic Silence: Gender and Economic Policy. London and Ottawa: Zed Books with the North-South Institute, 61-70.
- Guillebaud, J. 1991. Contraception: Your Questions Answered. London, Churchill Livingstone. (revised edn).

- Guppy, Nicholas. 1984. "Tropical Deforestation." 62:(4) Foreign Affairs, 928-965.
- HAI (Health Action International)-Europe and the Women's Health Action Foundation. 1994. Immunological Contraceptives - Designed for Populations not People HAI-Europe and WHAF, May, 1994.
- Haraway, Donna. 1986 "Primatology Is Politics by Other Means." In Bleier, Ruth (ed). Feminist Approaches to Science. NY: Pergamon Press, 77-118.
- Haraway, Donna. 1991. "Situated Knowledge: The Science Question in Feminism and the Privilege of Partial Perspective." In D. Haraway. Simians, Cyborgs, and Women: The Reinvention of Nature. New York: Routledge.
- Hardin, Garrett. 1974. "Living on a Lifeboat." 24 BioScience, 561-568.
- Hardin, Garrett. 1993. Living Within Limits: Ecology, Economics and Population Taboos. New York: Oxford University Press.
- Harding, Sandra. 1986. The Science Question in Feminism. Ithaca: Cornell University Press.
- Harding, Sandra. 1989. "Is There a Feminist Method." In Tuana, Nancy (ed.). Feminism and Science. Bloomington: Indiana University Press, 17-32.
- Harding, Sandra. 1991. Whose Science? Whose Knowledge?: Thinking From Women's Lives. Ithaca, N.Y.: Cornell University Press.
- Harding, Sandra. 1992. "Subjectivity, Experience, and Knowledge: An Epistemology from/for Rainbow Coalition Politics." 23(3) Development and Change, 175-193.
- Harding, Sandra. 1993. "Rethinking Standpoint Epistemology: What Is 'Strong Objectivity?'" In Linda Alcoff and Elizabeth Potter (eds). 1993. Feminist Epistemologies. New York: Routledge.
- Hardon, Anita Petra. 1992. "The Needs of Women Versus the Interests of Family Planning Personnel, Policy-Makers and Researchers: Conflicting Views on Safety and Acceptability of Contraceptives." 35:(6) Soc. Sci. Med. 753-766.
- Harper, Michael J. 1983. Birth Control Technologies: Prospects by the Year 2000. Austin: University of Texas.

- Hartman, Betsy. 1987. Reproductive Rights and Wrongs: The Global Politics of Population Control and Contraceptive Choice. N.Y.: Harper & Row, Publishers.
- Hartmann, Betsy 1991. "The Population Control Establishment: Behind the Myth." In Carla Marcelis and Anne Wright (eds). Women Creating Reproductive Freedom, Challenges and Dilemmas: A Critique of Population Control. Introductory Presentations Made at a Workshop Organized by Women's Health Interaction and INTER PARES, Ottawa, June 8, 1991.
- Hartmann, Betsy. 1993. "Old Maps and New Terrain: The Politics of Women, Population and the Environment in the 1990s." Paper presented to The Fifth International Interdisciplinary Congress on Women. San Jose, Costa Rica, February 23, 1993.
- Hartmann, Betsy. 1994. "Consensus and Contradiction on the Road to Cairo." In Successes and Failures in Population Policies and Programmes: Report from a Conference in Oslo, 25th May 1994. Oslo: ForUM (the Norwegian Forum for Development and Environment).
- Hartmann, Betsy. 1995. Reproductive Rights and Wrongs: The Global Politics of Population Control. Boston, MA: South End Press.
- Hartsock, Nancy C. M. 1983. Money, Sex and Power. New York: Longman.
- Hartsock, Nancy C.M. 1987. "False Universalities and Real Differences: Reconstituting Marxism for the Eighties." 1:(2) New Politics, 83-96.
- Henley, Madeline. 1993. "The Creation and Perpetuation of the Mother/Body Myth: Judicial and Legislative Enlistment of Norplant." 41:(2) Buffalo Law Review, 703-777.
- Hetman, Francois. 1977. "Technology on Trial." In Boyle et al. (eds). The Politics of Technology. N.Y.: Longman, Inc.
- Higgot, R.A. 1984. Political Development Theory. London: Croom Helur.
- Hodgson, Dennis. 1991. "The Ideological Origins of the Population Association of America." 17:(4) Population and Development Review, 1-34.
- Homer-Dixon, Thomas. 1994. "Population and Conflict." Distinguished Lecture Series on Population and Development: International Conference on Population and Development. Belgium, International Union for the Scientific Study of Population (IUSSP).

- HRP (Special Programme of Research and Development and Research Training in Human Reproduction). 1988. Research in Human Reproduction: Biennial Report 1986-87. Geneva: World Health Organization.
- Hubbard, Ruth. 1989. "Science Facts and Feminism." In Nancy Tuana (ed.). Feminism & Science. Bloomington, Indiana University Press, 119-131.
- Huezo, C.M., and C. Briggs. 1992. Rights of the Client. Medical and Service Guidelines for Family Planning. London: International Planned Parenthood Federation.
- Huntington, Samuel P. 1993. "Why International Primacy Matters." 17:(4) International Security, (Spring), 68-83.
- IDRC (International Development Research Centre). 1992. An Agenda 21 Organizer: Background on Current Activities. Ottawa, IDRC.
- Information Project for Africa, Inc. 1993. "Ambassadors of Colonialism: The International Development Trap." Working Paper #4, I.P.F.A. Foreign Policy Series. Washington, D.C.: IPFA.
- Jagger, Alison M. 1983. Feminist Politics and Human Nature. N.J.: Rowman & Littlefield Publishers Inc.
- Janeway, E. 1981. Powers of the Weak. New York: Morrow Quill Paperbacks.
- Jaquette, Jane S. and Kathleen Staudt. 1985. "Women as 'At Risk' Reproducers: Biology, Science and Population in US Foreign Policy." In Virginia Shapiro (ed), Women, Biology and Public Policy. Beverly Hills: Sage Publications, 235-268.
- Jayaraman, K.S. 1986. "Contraceptive Vaccines: Trials in India Launched." 23 October 1986. 323 Nature, 661.
- Johnston, Pari. 1994. "Discourses of Resistance." Unpublished paper, on file with author.
- Jones W.R. and Beale, A.J. 1991. Clinical Parameters in Pre- and Post-Registration Assessment of Vaccine Safety and Efficacy. In Ada, G.L. and Griffin, P.D. (eds.). 1991. op.cit., 147-164.
- Jones, W.R. et al. (1988) "Phase I Clinical Trial of a World Health Organisation Birth Control Vaccine." Saturday 11 June 1988 The Lancet, 1295-1298.

- Jones, Warren R. 1986. "Immunological Methods of Fertility Regulation." In Research on the Regulation of Human Fertility: Needs of Developing Countries and Priorities for the Future. An International Symposium organized by the Karolinska Institute and the University of Uppsala, Stockholm, February 7-9, 1983.
- Kabeer, Naila. 1985. "Do Women Gain from High Fertility?" In Haleh Afshar (ed.). Women, Work and Ideology in the Third World. London and New York: Tavistock Publishers.
- Kabeer, Naila. 1992. "From Fertility Reduction to Reproductive Choice: Gender Perspectives on Family Planning." Sussex University Institute of Development Studies Discussion Paper 299.
- Kabeer, Naila. 1994. Reversed Realities: Gender Hierarchies in Development Thought. London: Verso.
- Kamal, Sultana. 1987. "Seizure of Reproductive Rights? A Discussion on Population Control in the Third World and the Emergence of the New Reproductive Technologies in the West." In Patricia Spallone and Deborah Lynn Steinber (eds). Made to Order: The Myth of Reproductive and Genetic Progress. Oxford: Pergamon Press.
- Kaplan, Robert D. 1994. "The Coming Anarchy." 273:(2) Atlantic Monthly, 44-76.
- Kasun, Jacqueline. 1988. The War Against Population: The Economics and Ideology of World Population Control. San Francisco: Ignatius Press.
- Keller, Evelyn Fox. 1985. Reflections on Gender and Science. New Haven: Yale University Press.
- Kennedy, Paul. 1993. Preparing for the Twenty-First Century. New York: Random House.
- Kevles, Daniel J. 1985. A New Eugenics: Genetics and the Use of Human Heredity. Berkley, CA: University of California Press.
- King, Maurice. 1990. "Health in a Sustainable State." 336:(8716) Lancet, 666-667.
- Kirby, Sandra and McKenna, Kate. 1989. Experience, Research and Social Change: Methods from the Margins. Toronto: Garamond Press.
- Kirk, Dudley. 1944. "Population Changes and the PostWar World." 9:(1) American Sociological Review, 33-47..

- Knowles, J.C. 1993. "Implications of Changing Development Paradigms for Population Policy and Planning." Paper presented at Roundtable on Population and Development Strategies, Bangkok, 1993.
- Krell, David Farrell. 1993. Heidegger, Martin, 1889-1976. Basic Writings: From Being and Time (1927) to The Task of Thinking (1964). Rev. and expanded. San Francisco, Calif: HarperSanFrancisco.
- Kuhn, Thomas, S. 1970. The Structure of Scientific Revolutions. International Encyclopedia of Unified Science, Vol. 2 No. 2. Chicago: University of Chicago Press.
- LaCheen, Cary. 1986. "Population Control and the Pharmaceutical Industry." In Kathleen McDonnell (ed.). Adverse Effects: Women and the Pharmaceutical Industry. Toronto: Women's Educational Press.
- Lappé, Frances Moore and Rachel Schurman. 1988. "The Missing Piece in the Population Puzzle." Food First Development Report No. 4. September 1988. San Francisco, CA: Institute for Food and Development Policy.
- Latin American and Caribbean Women's Health Network. 1993. Women and Population Policies. Proceeding from Conference held July 5-9, 1993, Oaxtepec, Mexico.
- Leibenstein H. 1954. A Theory of Economic-Demographic Development. Princeton, N.J.: Princeton University Press.
- Lellouche, Pierre. 1993. "France in Search of Security." 72:(2) Foreign Affairs, 122-131.
- Lewis, Debra. 1988. Just Give us the Money: A Discussion of Wage Discrimination and Pay Equity. Vancouver, BC: Women's Research Centre.
- Longino, Helen, E. and Evelyn Hammonds. 1990. "Conflicts and Tensions in the Feminist Study of Gender and Science." In Marianne Hirsch and Evelyn Fox Keller (eds.). Conflicts in Feminism. N.Y.: Routledge, 164-183.
- Lundberg, Norma. 1986. "The Bureaucratization of Birth Control: Textual Analysis of Background Notes on Birth Planning." 15:(1) Resources for Feminist Research, 34-36.
- Macdonell, Diane. 1986. Theories of Discourse: An Introduction. N.Y.: Blackwell, Inc.

- Mackenzie, F. 1992. "The worse it got, the more we laughed": a discourse of resistance among farmers of Eastern Ontario." 10 Society and Space, 691-713.
- Maguire, Patricia. 1984. Women in Development: An Alternative Analysis. Center for International Education, University of Massachusetts.
- Marcelo, A.B., and A. Germain. 1994. "Women's Perspectives on Fertility Regulation Methods and Services." In P.F.A. Van Look and G. Perez-Palacios (eds). Contraceptive Research and development 1984-1994: The Road from Mexico City to Cairo and Beyond. New Delhi: Oxford University Press.
- Mass, Bonnie. 1976. Population Target: The Political Economy of Population Control in Latin America. Toronto: Women's Press.
- McGraw, Judith. 1982. "Women and the History of American Technology." 7:(4) Signs: Journal of Women in Culture and Society, 798-828.
- McNicoll, Geoffrey. 1992. "The Agenda of Population Studies: A Commentary and Complaint." 18:(3) Population and Development Review, 399-414.
- Menzies, Heather. 1989. FastForward and Out of Control: How Technology is Transforming Your Life. Toronto: Macmillan.
- Merchant, Carolyn. 1980. The Death of Nature: Women Ecology and the Scientific Revolution. San Francisco: Harper and Row Publishers.
- Meriam Webster Inc. 1986. Webster's Third International Dictionary. Merriam-Webster Inc.
- Mies, Maria and Vandana Shiva. 1993. Ecofeminism. Halifax, N.S.: Fernwood Publishers.
- Mies, Maria. 1983. "Towards a Methodology for Feminist Research." In Bowles, G and Duelli Klein, R (eds) 1983. Theories of Women's Studies. London: Routledge and Kegan Paul.
- Mies, Maria. 1987. "Sexist and Racist Implications of New Reproductive Technologies." 12:(3) Alternatives, 323-342.
- Mitchison, N.A. 1991. "Chairman's summary: Present Status and Future Prospects of Antifertility Vaccines." In Ada, G.L. and Griffin, P.D. (eds) *op.cit.*, 247-250.

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PRECISIONSM RESOLUTION TARGETS

- UNFPA. 1993a. "Population and Development Strategies: Review of the Past and Future Prospects." Background Paper for Round Table on Population and Development Strategies, Bangkok, 17-19 November, 1993. UNFPA Technical and Evaluation Division, Population Data, Policy and Research Branch.
- UNFPA. 1993b. UNFPA 1993 Report. New York, UNFPA.
- UNFPA. 1994a. Population and Development Strategies, Technical Report No. 19. New York: UNFPA.
- UNFPA. 1994b. U.N.F.P.A. New York: UNFPA.
- UNICEF. 1994. First Call for Children. New York: UNICEF, Division of Information.
- USAID (United States Agency for International Development). 1974. Office of Population. Population Program Assistance: United States Aid to Developing Countries. Washington, D.C.: U.S. Government Printing Office.
- Van Esterik, Penny. 1989. Beyond the Breast-Bottle Controversy. N.J.: Rutgers University Press.
- Wajcman, Judy. 1994. "Delivered into Men's Hands? The Social Construction of Reproductive Technology." In Gita Sen and Rachel C. Snow (eds). 1994. Power and Decision: The Social Control of Reproduction. Boston, MA: Harvard University Press, 153-176.
- Ward, Madeline. 1995. "Foes of anti-fertility vaccine betray oppressed women." Ottawa Citizen, June 28, 1995.
- Warick, Gregory. 1985. "World Population: Continuing Challenges." North South Institute Briefing Paper.
- Warren, Karen. 1987. "Feminism and Ecology: Making Connections." 9 Environmental Ethics, 3-20.
- Warwick, Donald P. 1982. Bitter Pills: Population Policies and their Implementation in Eight Developing Countries. New York: Cambridge University Press.
- Warwick, Donald P. 1991. "The Ethics of Population Control." In Godfrey Roberts (ed.) Population Policy: Contemporary Issues. New York: Praeger Publishers, 21-38.

- PCC (Population Crisis Committee). 1985. "Private Organizations in the Population Field " 16 Population, 5
- PCC (Population Crisis Committee). 1992. World Access to Birth Control: 1992 Report on World Progress Towards Population Stabilization. Virginia: Colorcraft of Virginia.
- Petchesky, Rosalind Pollack. 1981. "'Reproductive Choice' in Contemporary United States: A Social Analysis of Female Sterilization." In Karen L. Michaelson (ed). And the Poor Get Children: Radical Perspectives on Population Dynamics. N.Y.: Monthly Review Press.
- Petchesky, Rosalind Pollack. 1984. Abortion and Woman's Choice: The State, Sexuality, and Reproductive Freedom. N.Y.: Longman Inc.
- Pollack, S. 1985. "Sex and the Contraceptive Act." In Homans, H. (ed). The Sexual Politics of Reproduction. London: Gower.
- Ramazanoglu, Caroline. 1992. "On Feminist Methodology: Male Reason Versus Female Empowerment " 26:(2) Sociology, 207-212.
- Report of the Symposium. 1991. "Points to Consider in the Assessment of the Safety and Efficacy of Vaccines to Regulate Fertility." In Ada, G.L. and Griffin, P.D. (eds) op.cit., 251-298.
- Richter, Judith 1993. Vaccination Against Pregnancy: Miracle or Menace? Bielefeld and Amsterdam: BUKO Pharma-Kampagne and Health Action International (HAI).
- Rockefeller Foundation. 1993. "International Research in Reproductive Health: A Guide to Agencies/Organizations." Draft.
- Rodriguez-Trias, Helen. 1982. "Sterilization Abuse." In Ruth Hubbard, Mary Sue Henitin and Barbara Fried (eds.). Biological Woman - The Convenient Myth. Schenkman Publishing Company, Inc., 147-160.
- Rose, Hilary. 1987. "Victorian Values in the Test-Tube: The Politics of Reproductive Science and Technology." In Michelle Stanworth (ed.) Reproductive Technologies: Gender, Motherhood and Medicine. Minneapolis: University of Minnesota Press.
- Rose, N.R. et al. 1991. "Immunological Hazards Associated with Human Immunization with Self or Self-Like Antigens." In Ada, G.L. and Griffin, P.D. (eds) 1991. op.cit pp. 122-146.

- Ross, John A., and Stephen L. Isaacs. 1988. "Costs, Payments, and Incentives in Family Planning Programs: A Review for Developing Countries." 19(5) Studies in Family Planning, 270-283.
- Rothman, Barbara Katz. 1986. The Tentative Pregnancy: Prenatal Diagnosis and the Future of Motherhood. N.Y.: Viking Penguin, Inc.
- Rothschild, Joan. 1983. Machina Ex Dea: Feminist Perspectives on Technology. N.Y.: Pergamon Press.
- Ruether, Rosemary Radford. 1975. New Woman/New Earth: Sexist Ideologies and Human Liberation. N.Y.: The Seabury Press.
- Rushton, Philippe J. 1994. Race, Evolution and Behavior: A Life History Perspective. Toronto: Transaction Publishers.
- Sachs, B.P., P.M. Layde, G.L. Rubin, R.W. Roach. 1982. "Reproductive Mortality in the U.S." 20 Journal of the American Medical Association, 247-253.
- Sadik, Nafis. 1990. The State of World Population. United Nations Fund for Population Activities. New York: UNFPA.
- Salas, Rafael M. 1985. Reflections on Population. N.Y.: Pergamon Press Inc.
- Sarhadi, Dhooleka. 1993. "Raising Some Concerns about the Business of Contraception." 4 Diva: Quarterly Journal of South Asian Women, 30-34.
- Schatz, U., and I. Schneider. 1991. Antibodies Against Pregnancy: The Dream of the Perfect Birth from the Laboratory. A documentary film by U. Schatz, with the assistance of I. Schneider. English copy available through Ulrike Schatz, Bleicher Str. 2, D- 22767 Hamburg, Germany..
- Schrater, Angeline Faye. 1992. "Contraceptive Vaccines: Promises and Problems." In Helen Bequaert Holmes (ed). Issues in Reproductive Technology: An Anthology. New York and London. Garland Publishing, Inc.
- Seaman, Barbara and Gideon Seaman, M.D. 1977. Women and the Crisis in Sex Hormones. N.Y.: Bantam Books.
- Sen, Gita and Caren Grown (eds). 1987. Development Crises, and Alternative Visions. London: Zed Books.

- Sen, Gita, Adrienne Germain and Lincoln C. Chen (eds). 1994. Population Policies Reconsidered: Health, Empowerment, and Rights. Boston: Harvard University Press.
- Sen, Gita. 1989. "Fertility Decline and Women's Autonomy: Another Look." Paper presented at the Ninth World Congress of the International Economics Association, Athens, Greece, 28 August - September 1.
- Sen, Gita. 1994. "Development, Population, and the Environment: A Search for Balance." in Sen, G. Germaine, A. and Chen, L.C. (eds). 1994. *op cit.*, pp. 63-74.
- Shearman. 1982. "Forward." In Jones, W.R. Immunological Fertility Regulation. Oxford: Blackwell Scientific Publications.
- Shelley, Mary, 1818. Frankenstein; or, The Modern Prometheus. London: Lackington, Hughes, Harding, Mavor, & Jones. Reprinted in Bennet, Betty T. and Charles E. Robinson, eds. 1990. The Mary Shelley Reader. N.Y.: Oxford University Press
- Simon, Julian 1991. "The Population Establishment, Corruption, and Reform." In Godfrey Roberts (ed.). Population Policy: Contemporary Issues. NY: Praeger Publishers, 39-58.
- Simon, Julian. 1981. The Ultimate Resource. Princeton, NJ: Princeton University Press.
- Smith, Dorothy. 1987. "Women's Perspective as a Radical Critique of Sociology." In Sandra Harding (ed). 1987. Feminism and Methodology. Milton Keynes: Open University Press, 84-96.
- Smyke, Patricia. 1991. Women and Health. London: Zed Books.
- Sommer, Doris. 1988. "Not Just a Personal Story: Women's Testimonios and the Plural Self." In Bella Brodzki and Celeste Schenck (eds). 1988. Life/Lines: Theorizing women's Autobiography. Ithaca: Cornell University Press.
- Spallone, Patricia. 1989. Beyond Conception: The New Politics of Reproduction. (London: Macmillan Education, 1989)
- Stackhouse, John. 1994. "Quantity of Life." Globe and Mail, September 3, 1994, D1.
- Stamp, Patricia. 1989. Technology, Gender and Power in Africa. Ottawa: International Development Research Centre.

- Stanworth, Michelle (ed). 1987. Reproductive Technologies: Gender, Motherhood and Medicine. Minneapolis: University of Minnesota Press.
- Stanworth, Michelle. 1990. "Birth Pangs: Contraceptive Technologies and the Threat to Motherhood." In Marianne Hirsch and Evelyn Fox Keller (eds.). Conflicts in Feminism. N.Y.: Routledge, 277-304.
- Stevens, Vernon C. 1986. "Current Status of Antifertility Vaccines Using Gonadotropin Immunogens." 7:(12) Immunology Today, 369-374.
- Stone, Jennifer L. 1991. "Contextualizing Biogenetic and Reproductive Technologies." 8:(3) Critical Studies in Mass Communications, 309-332.
- Stover, John and Tom Goliber. 1992. "The Approach of the RAPID Project to Building Political Support for Population Programs." Paper presented at the annual meeting of the Population Association of America. Denver, CO: April.
- Talwar, G.P. 1994. "Immuno-Contraception - Guest Editorial." 6 Current Opinion in Immunology, 698-704.
- Talwar, G.P., Om Sing, and Rahul Pal. 1994. Phase II Report. Ottawa: IDRC.
- The Globe and Mail. 1995. *Population crisis feared as billions enter fertile years: Failing to address impact on immigration may be the "ultimate global blunder"* Saturday, March 4, 1995, A1.
- Tuana, Nancy (ed). 1989. Feminism and Science. Bloomington. Indiana University Press.
- U.S.A. 1984. "Policy Statement of the United States of America at the United Nations International Conference on Population." Reproduced in 10:(3) Population and Development Review, 574-579.
- UN (United Nations). 1994. Programme of Action of the United Nations International Conference on Population and Development. New York: United Nations. (unofficial final draft).
- UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction. 1993. Fertility Regulating Vaccines: Report of a Meeting Between Women's Health Advocates and Scientists to Review the Current Status of the Development of Fertility Regulating Vaccines. Geneva, Switzerland, 17-18 August, 1992. World Health Organization, 1993.

- UNFPA. 1993a. "Population and Development Strategies: Review of the Past and Future Prospects." Background Paper for Round Table on Population and Development Strategies, Bangkok, 17-19 November, 1993. UNFPA Technical and Evaluation Division, Population Data, Policy and Research Branch.
- UNFPA. 1993b. UNFPA 1993 Report. New York, UNFPA.
- UNFPA. 1994a. Population and Development Strategies, Technical Report No. 19. New York: UNFPA.
- UNFPA. 1994b. U.N.F.P.A. New York: UNFPA.
- UNICEF. 1994. First Call for Children. New York: UNICEF, Division of Information.
- USAID (United States Agency for International Development). 1974. Office of Population. Population Program Assistance: United States Aid to Developing Countries. Washington, D.C.: U.S. Government Printing Office.
- Van Esterik, Penny. 1989. Beyond the Breast-Bottle Controversy. N.J.: Rutgers University Press.
- Wajcman, Judy. 1994. "Delivered into Men's Hands? The Social Construction of Reproductive Technology." In Gita Sen and Rachel C. Snow (eds). 1994. Power and Decision: The Social Control of Reproduction. Boston, MA: Harvard University Press, 153-176.
- Ward, Madeline. 1995. "Foes of anti-fertility vaccine betray oppressed women." Ottawa Citizen, June 28, 1995.
- Warick, Gregory. 1985. "World Population: Continuing Challenges." North South Institute Briefing Paper.
- Warren, Karen. 1987. "Feminism and Ecology: Making Connections." 9 Environmental Ethics, 3-20.
- Warwick, Donald P. 1982. Bitter Pills: Population Policies and their Implementation in Eight Developing Countries. New York: Cambridge University Press.
- Warwick, Donald P. 1991. "The Ethics of Population Control." In Godfrey Roberts (ed.) Population Policy: Contemporary Issues. New York: Praeger Publishers, 21-38.

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