



Department of Justice Ministère de la Justice
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TECHNICAL DOCUMENT

**NEW REPRODUCTIVE TECHNOLOGIES:
AN ANNOTATED BIBLIOGRAPHY**

**Laura Druar and Eric Lundgren
Research Assistants
Public Law and Environmental Scanning Unit
Research Section**

May 1993

TR 1993-7e

**Law Reform, Research and Development Directorate /
Sous-direction de la réforme du droit,
de la recherche et du développement**

**Corporate Policy and Programs Sector /
Secteur des politiques et programmes ministériels**

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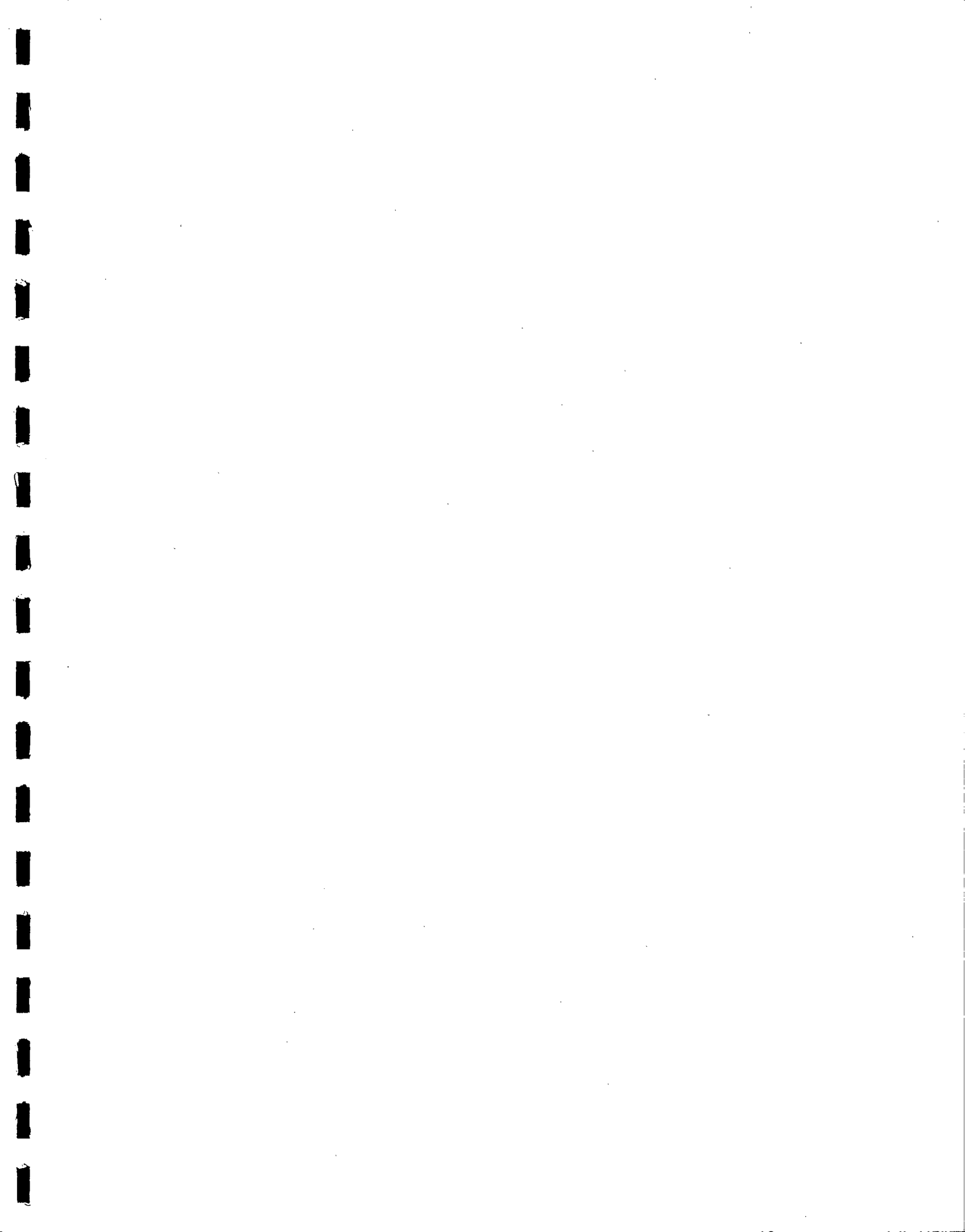
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*The present study was produced by the Research Section,
Department of Justice Canada. The views expressed herein are solely those
of the authors whose articles are annotated and do not necessarily
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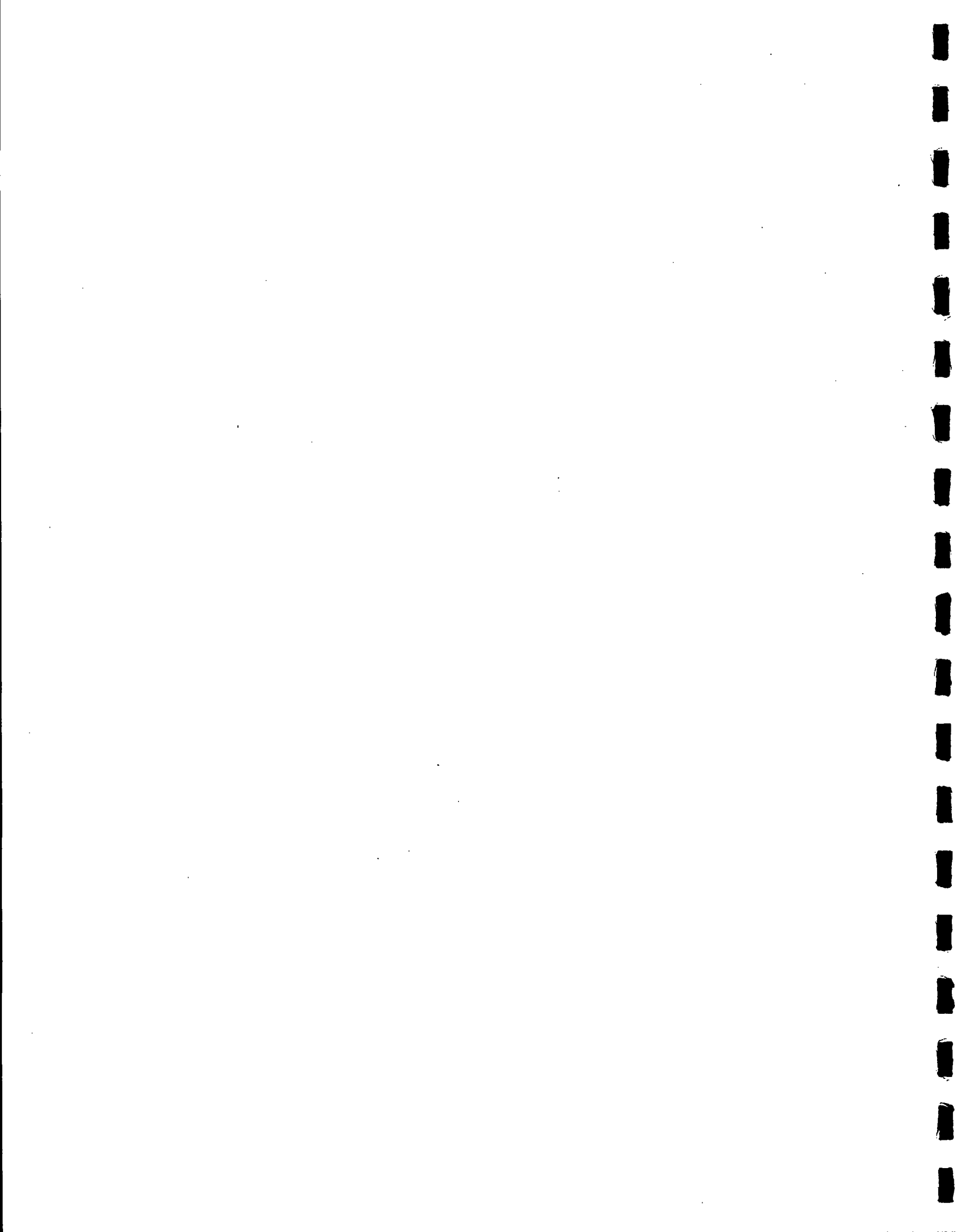
**MATERIALS ORIGINATING/COMMISSIONED BY THE ROYAL
COMMISSION ON NEW REPRODUCTIVE TECHNOLOGIES**

Royal Commission Undertakes Extensive Consultations Program To Seek Views and Experiences Of All Canadians. May 29, 1990.

This article announces the details of the *Public Consultations Program*, implemented by the Royal Commission on New Reproductive Technologies during the Fall of 1990. The Commission hoped to facilitate participation in this program from a wide-ranging, diverse group of Canadians, on a topic that has vast national implications. The *Public Consultations Program* consisted of three interrelated phases including public hearings, consultative meetings, and individual sessions. New reproductive technologies were considered originally as medical and scientific techniques to help infertile couples conceive, and they have grown significantly in both scope and application in recent years. Areas such as reversals of sterilization, artificial insemination, in vitro fertilization, embryo transfer, surrogate childbearing, and genetic procedures such as prenatal screening, therapeutic interventions and fetal tissue transplants are currently being examined and analyzed by the Royal Commission on New Reproductive Technologies.

A Guide to Public Participation in the Work of the Royal Commission on New Reproductive Technologies. September 1990.

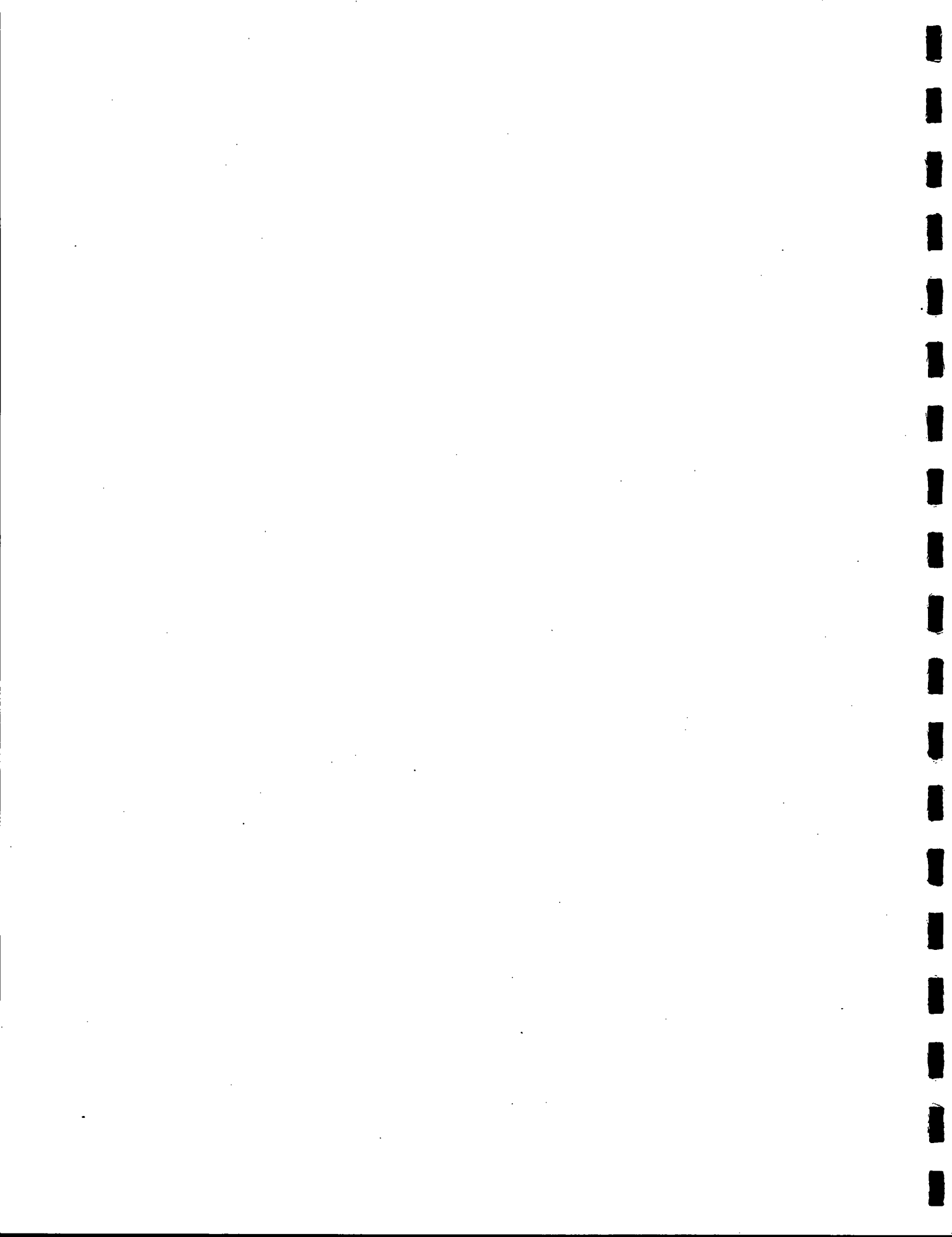
This brochure, organized in a question and answer format, discusses the mandate of the Royal Commission on New Reproductive Technologies. It also outlines how Canadians can participate in the work of this Commission through the *Public Consultations Program*. Topics addressed in this brochure include the Royal Commission's proposed areas of research, the specific issues under examination, the economic implications of new reproductive technologies (NRTs) and the associated legal and ethical issues. Individuals can express their views to the Commission through public hearings, written or recorded submissions, consultative meetings, individual sessions, or through a toll-free telephone line in which people can record their views and/or make further inquiries. The diversity of experience of the members of the Royal Commission represents one of their strong points. When coupled with the different views and experiences of Canadians across the country, the Royal Commission will undoubtedly be better prepared to analyze NRTs, and subsequently, make recommendations for new policies that all Canadians can accept.



- 3) On March 12, 1992, Patricia Baird spoke at the Labour Canada Conference on "Workplace Health and Safety: The 21st Century." She discussed how workplace hazards could potentially lead to infertility, expressing a particular interest in this topic as it relates to firemen.
- 4) "Examining The Future: Physicians of Tomorrow" was delivered by Baird at the University of Western Ontario Medical Students' Weekend on February 23, 1991. Discussing NRTs and the Canadian views that she has heard on this topic, Baird proceeded to offer these medical students advice on how to prepare themselves to be good doctors amidst a rapidly changing Canadian society.
- 5) "Implications of Scientific Innovation In The New Reproductive Technologies" was presented to the Canadian Institute for the Administration of Justice on October 12, 1990. Baird discussed pre-implantation diagnosis, total surrogacy and embryo freezing, how they are currently used, and their potential harms and benefits.
- 6) Baird addressed the 46th Annual Meeting of the Society of Obstetricians and Gynaecologists of Canada with a speech entitled "New Reproductive Technologies: The Challenge Ahead," on June 22, 1990. Beginning with an explanation of the broad mandate of the Royal Commission on New Reproductive Technologies, Baird continued with an in depth discussion of the *Public Consultations Program* and the *Research and Evaluation Program*, both designed to facilitate a more thorough understanding of these issues.
- 7) To help celebrate the 20th anniversary of the Royal Commission on the Status of Women on February 22, 1990, Baird spoke to the British Columbia Status of Women. Over the years, women have made significant gains for themselves by making their issues part of national public policy agendas. The creation of the Royal Commission on New Reproductive Technologies represents a most notable gain. In this address, Baird discussed NRTs, the Royal Commission's mandate, as well as the six specific areas that are being examined and analyzed by the Commissioners.

A Guide to the Research and Evaluation Program of the Royal Commission on New Reproductive Technologies. March 1991.

A Royal Commission on New Reproductive Technologies was established in October of 1989 with the sole purpose of researching and analyzing the issues surrounding this new and controversial topic. The Royal Commission arose out of a growing realization that a large gap existed between the rapid pace of technological development, and the accompanying governmental policies needed to regulate these technologies. This brochure outlines the *Research and Evaluation Program* of the Royal Commission on New Reproductive Technologies, which above all, is designed to facilitate an increased understanding on behalf of all Canadians of the Royal Commission's research priorities. Adhering to a multi-disciplinary approach, the *Research and Evaluation Program* will consist of four broad categories of projects, including documentation, overviews, new research and evaluation. Commissioned studies will be conducted in four specific areas: 1) causes and prevention of infertility, 2) methods of assisted human reproduction, 3) pre-natal diagnosis and genetics, and 4) embryo and fetal tissue research. Within these various realms, the Commission will



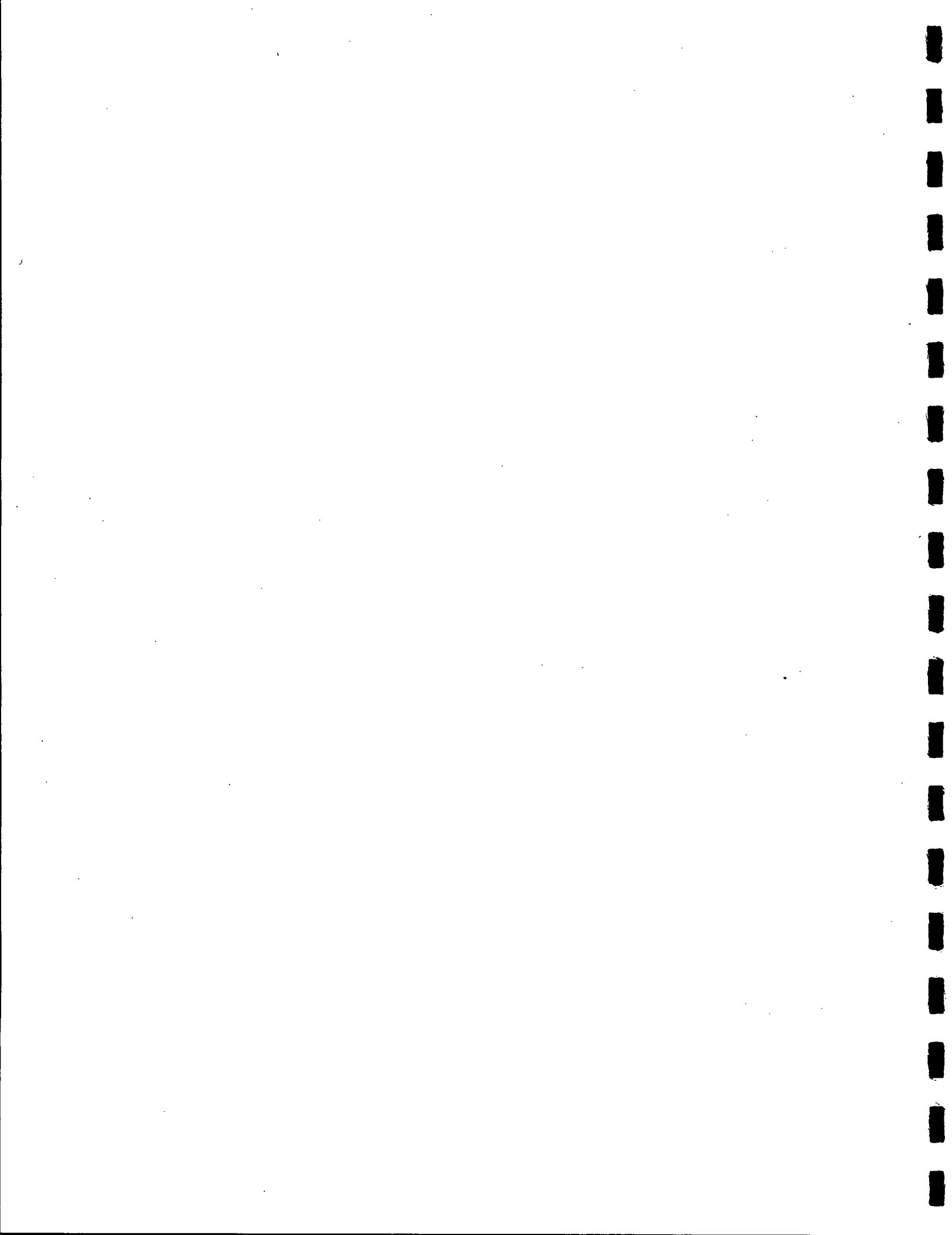
One of the most frequently emerging themes from the Public Hearings maintains that NRTs are very powerful with vast national implications for society. As well, many Canadians believe that "technological developments are outpacing society's ability to understand and control them." The remaining sections of this document address issues such as infertility, the implications of NRTs for various groups in Canadian society, as well as some possible ways in which society could accommodate these new developments in technology.

Royal Commission on New Reproductive Technologies Releases Summary of Issues Raised During Public Hearings. September 9, 1991.

This article is a summary of the key issues contained in the document *What We Heard: Issues and Questions Raised During the Public Hearings*. These issues were brought forth during Public Hearings held by the Royal Commission on New Reproductive Technologies in the Fall of 1990. *What We Heard* merely reflects the views and concerns of the participants of the Public Hearings; it is by no means a comprehensive analysis of the numerous issues surrounding new reproductive technologies (NRTs). A common concern that the implications of these technologies have not been adequately addressed was expressed by the hearing participants. Furthermore, most people indicated that NRTs have the potential to cause significant harm and/or benefit to both users and producers of NRTs. As well, specific concerns were voiced by many groups, including women's groups, infertile individuals and couples, counsellors, religious groups, and groups representing people with disabilities. The Royal Commission held Public Hearings in 17 cities across Canada between September 11, 1990 and November 29, 1990, at which time, diverse and wide-ranging views were heard from over 550 people. A more thorough examination of the emerging themes from these Public Hearings can be conducted by obtaining the 44 page summary of *What We Heard: Issues and Questions Raised During the Public Hearings*, from the Royal Commission itself.

Update: A Letter From The Chairperson. January 1992.

To begin this letter, Patricia Baird, the Chairperson of the Royal Commission on New Reproductive Technologies, expresses her regrets over the revocation of the appointments of four Commissioners in mid-December of 1990. She continues with an impressive description of the credentials of the five remaining individuals who will be contributing to the Royal Commission's Final Report. A general discussion on the work of the Royal Commission and the implications of new reproductive technologies follows. Currently, not enough reliable data exists with which recommendations for new public policies can be based upon. Therefore, the Royal Commission has undertaken a massive *Research and Evaluation Program*, the details of which are described within this UPDATE article. Research will be conducted in four major areas including: 1) causes and prevention of infertility; 2) assisted human reproduction; 3) pre-natal diagnosis and genetics; and 4)

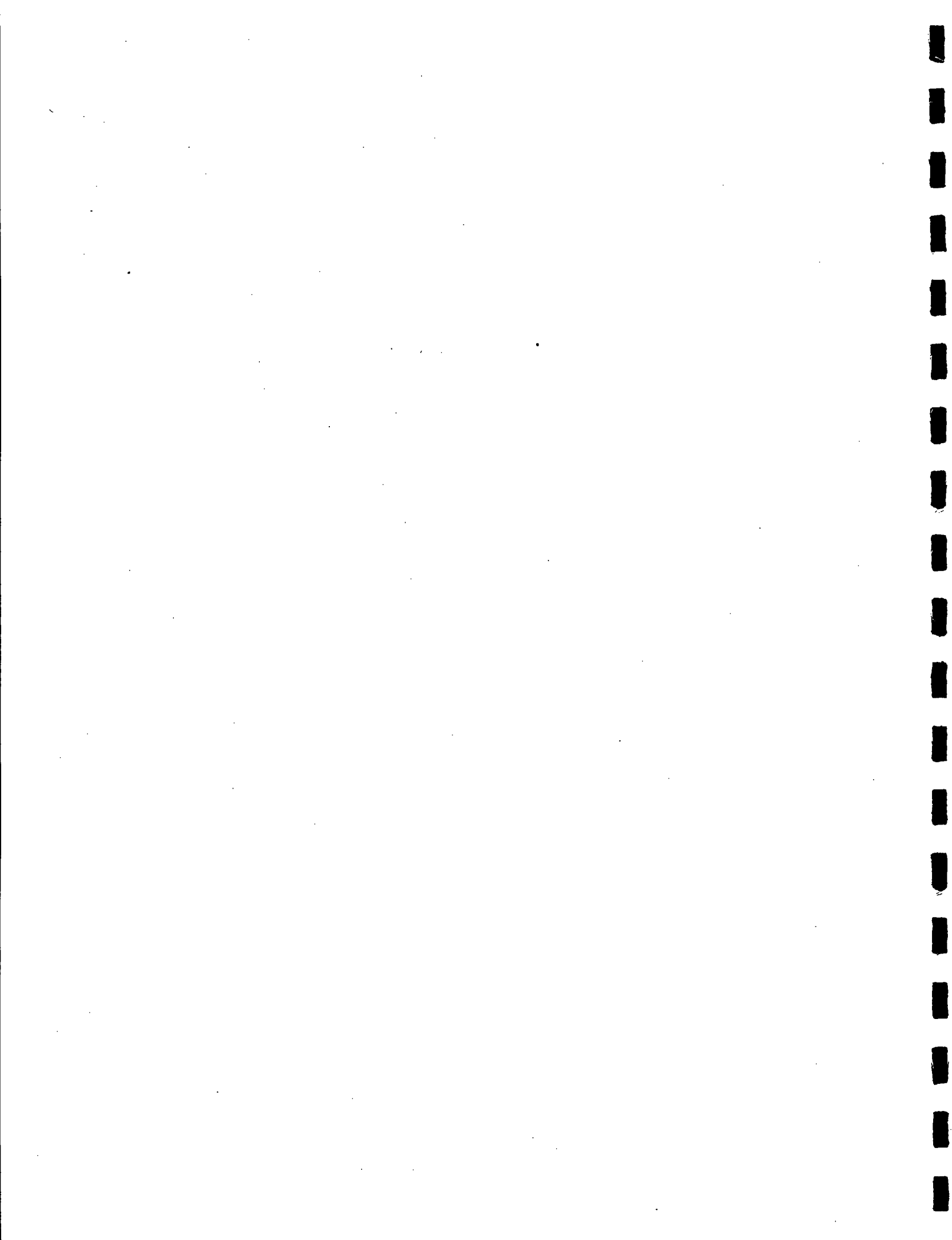


Achilles, Rona. *Donor Insemination: An Overview*. March 1992.

In light of the implementation of the Royal Commission on New Reproductive Technologies, donor insemination (DI), already practised in Canada for several decades, is presently receiving a great deal of public attention. Used by a variety of people for many different reasons, DI represents a reproductive alternative to sexual intercourse. In this overview, the author discusses the practice of DI, while indicating where gaps in research on this issue currently exist. A diverse range of people turn to DI. Predominantly, heterosexual couples with a male infertility problem utilize this procedure, although single and lesbian women now view it as a viable option as well. The author discusses the various types of DI, and their relative costs, noting approximate success rates for each. In the 1950's and 1960's, the controversy surrounding DI centred around the legal, ethical and religious implications of this procedure. However, today the debates have shifted towards sexually transmitted diseases (STD's), and the possibility of their transmission through DI. Furthermore, the author outlines the history of artificial insemination from its origins in animal experimentation, to the first recorded human artificial insemination, to the first recorded use of frozen sperm. Little empirical research exists on the psychological issues raised by the practice of DI, particularly on the impact that this technique has on DI mothers, their partners, sperm donors, and children conceived through DI. The author concludes with specific recommendations for further research with respect to the practice of DI.

Survey of Canadian Fertility Programs. April 1993.

This paper, commissioned by the Royal Commission on New Reproductive Technologies, informs the general public on Canadian Fertility Programs. The objectives of the survey are as follows: 1) provide 1991 statistics on patients, treatments, and outcomes; 2) document record-keeping practices; 3) provide data regarding counselling; 4) analyze written materials that were given to patients; and 5) identify clinic objectives, definitions of key terms, non-medical criteria for admitting patients, and quality assurance procedures. Every recognized fertility program in Canada was asked to fill in a questionnaire, as were a small number of practitioners providing therapeutic donor insemination. The survey found that most of the infertility programs are located in central Canada with the most common infertility program being artificial insemination (AI). In 1991, approximately 2900 people took part in *in vitro* fertilization (IVF) programs, 3400 in AI programs, and only one involved in a surrogacy arrangement. The most commonly reported reasons for seeking AI were an absence of sperm or poor quality sperm in the male partner. Also, the survey found that lesbians or women without partners were refused treatment in almost half of the programs. The question of informed consent is raised because most of the education material provided requires at least two years of post-secondary school education, and much of it is written poorly. Some other questions that are in need of further study are: a comprehensive data base of practitioners using AI in office-based practice, and data on their use of fresh sperm; more and better data on information and counselling of gamete donors; and the extent of



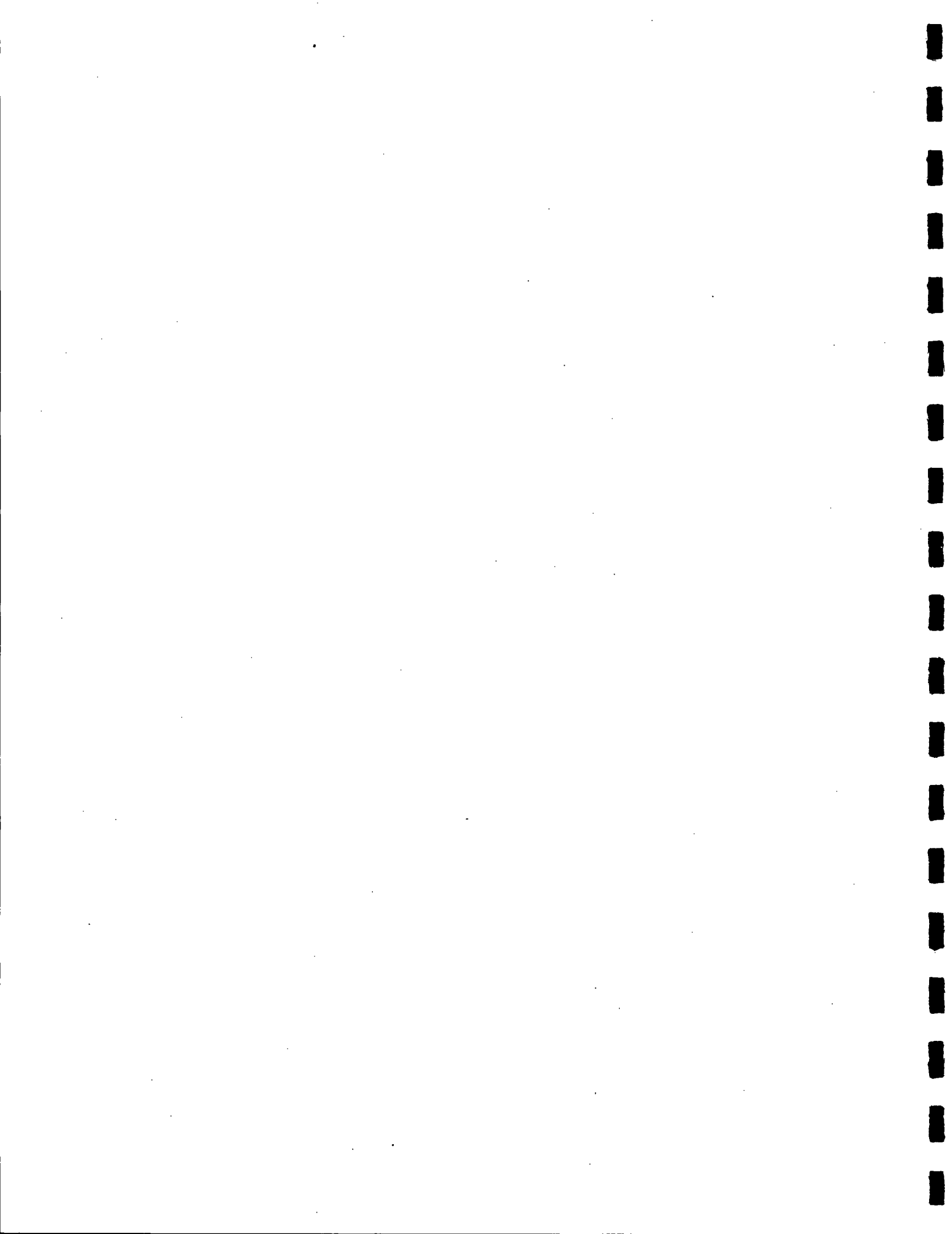
MATERIALS FROM OTHER SOURCES

Burstyn, Varda. "Making Perfect Babies." *Canadian Forum*, (April 1992): 13-19.

The biological and social implications of procreative and genetic technologies are unclear. Many people are aware of in vitro fertilization, egg donation and surrogate mothers, but another revolution is under way, a biorevolution. The Science Council of Canada estimates that the biotechnical industry will be worth \$180 billion worldwide by 1996. Burstyn critically examines this industry, which has mushroomed in the last decade, by determining who controls these technologies. Her answer is the doctors, research scientists, and pharmaceutical companies that have "commodified" human reproduction with no thought for physical or social consequences. The common objection, held by many interest groups, to genetic technologies is a rejection of eugenics. Burstyn points out three main areas of genetic technology, and identifies the risks and implications of each. The first involves "correcting" disease by injecting different genetic codes into fully grown individuals. The second area concerns pre-natal genetic screening of embryos to detect any undesirable genetic make-up of the child. The final area is germ line therapy, or the changing of the genetic code of an individual to affect future generations. The consequences of these genetic technologies on society, on economics, on the state, on the disabled, and, above all, on women are investigated.

Bryant, Heather. "The Infertility Dilemma: Reproductive Technologies and Prevention." Ottawa: Canadian Advisory Council on the Status of Women, 1990.

This paper provides an overview for the non-medical reader of the impact of those NRTs designed to treat infertility. Incidence of infertility is on the rise in Canada, and new reproductive technologies (NRTs) are undoubtedly welcomed by those individuals who are infertile. However, success rates for these new technological developments remain quite low, and these procedures are still in the experimental stages. NRTs have an impact on society far beyond the medical and technological sphere, venturing into social, legal, ethical, economic, research and health domains as well. One of the consequences of this reproductive revolution is that the less technical remedies (but potentially just as effective) are often overlooked. This paper explores the possibility and feasibility of developing preventative approaches to infertility, such as, programs aimed at avoiding sexually transmitted diseases (STDs) especially among young women. A program such as this would require a de-emphasis on curative medicine. Hence, the final section of this paper outlines the future research requirements and changes in social policy that may facilitate a shift in emphasis from cure to cause. Above all, the intent of this paper is to depict infertility as a reproductive health concern, which, aside from being a medical problem, requires societal consideration and input from many disciplines.

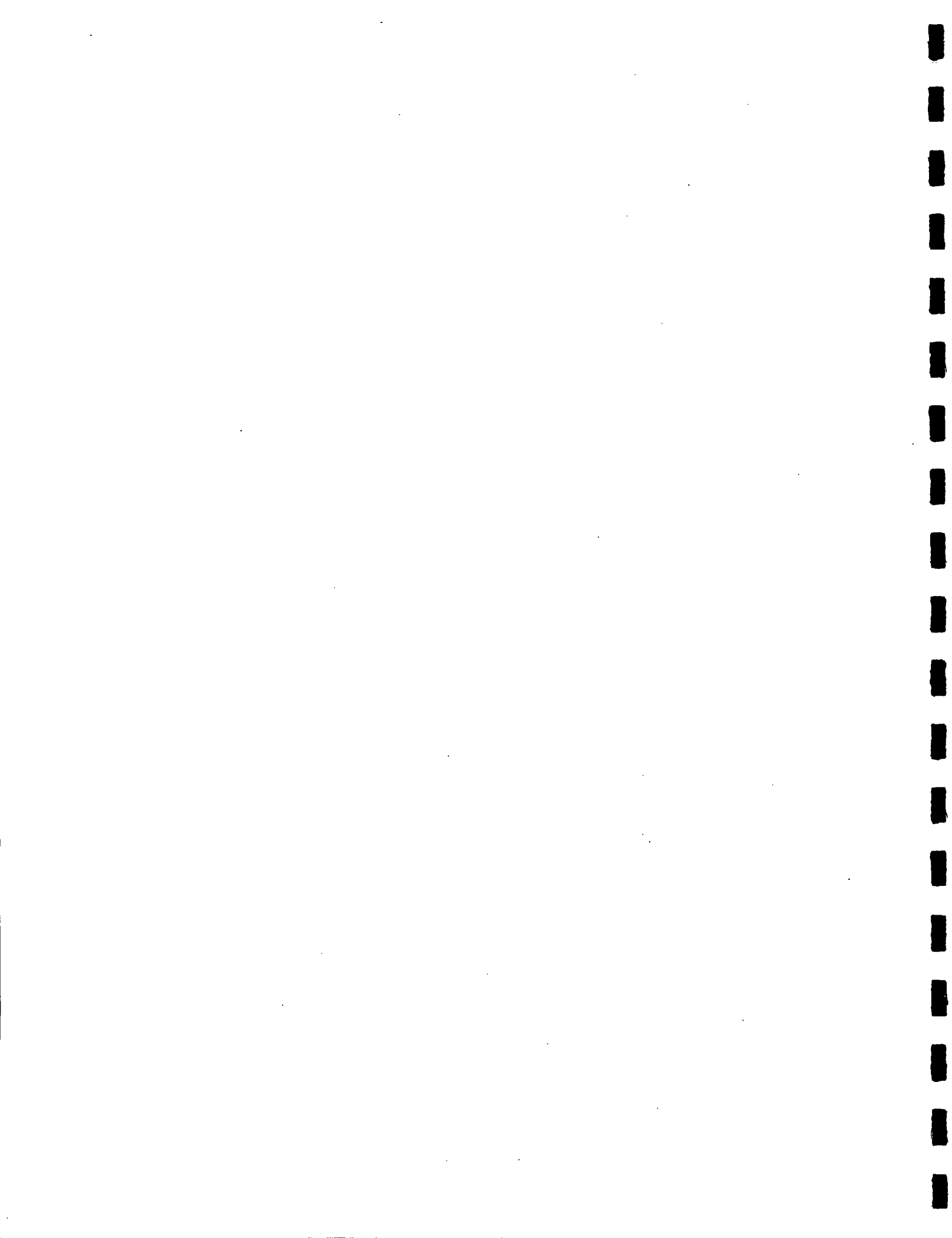


Franklin, Ursula. "Community and Technology." *Canadian Forum*, 69, 791 (July/August 1990): 20-23.

University of Toronto scientist Ursula Franklin discusses in this article how technology influences our perceptions of reality. By drawing an analogy between technology and democracy, she portrays technology in terms of ideas and dreams, practices and procedures, and hopes and myths. Secondly, she examines technology within a global context, as it pertains to individuals living and working in the real world. According to Franklin, four types of realities exist that continually influence people's attitudes and actions: 1) vernacular, 2) extended, 3) constructed, and 4) projected. An explanation of how people relate to each of these realities is offered. Furthermore, the relationship between science and technology, and the nature of experience are illustrated as aspects of the real world of technology. Ultimately, all levels of reality are influenced by science and technology; but, they can be grossly distorted as well. Moreover, Franklin discusses how the speed of transmission of messages drastically changed our world of technology in a relatively short period of time. As well, the world of images provided by televisions, radios and videos has strongly impacted society's perceptions of reality by creating "pseudocommunities" of viewers and listeners. Undeniably, technological developments have, and will continue to, affect our approaches to and perceptions of the future.

Hyatt, Douglas E. and William J. Milne. "Can Public Policy Affect Fertility?" *Canadian Public Policy*, 17, 1 (1991): 77-85.

This paper examines the relationship between public policy and fertility rates in Canada. The baby boom ensuing World War II was replaced quickly with a baby bust; thereby, creating a difficult challenge in terms of explaining these changing fertility rates in socio-economic terms. Whether or not a government policy can affect a fertility rate is an interesting, albeit difficult hypothesis to test since Canadian public policy has never been designed to directly influence birth rates. However, some programs may indirectly affect fertility behaviour, such as family allowance benefits, the Child Tax Credit, and maternity benefits available under the Unemployment Insurance Act (UI). This paper attempts to describe and estimate a time series model of the total fertility rate, and the possible impact of government programs, that would ultimately lower the "cost" of raising children. Beginning with a discussion of fertility from an economic perspective, a time series model is then outlined, followed by a description of the data and the estimated results. Argued within this paper is the hypothesis that UI maternity benefits have had a small, but positive impact on the overall fertility rates. The authors conclude that their results do not offer insights into which specific government policies would most efficiently facilitate a more rapid population growth; hence, further research is required.



daughters to the doctors as compared to the number of visits they make with their sons; and, females are deprived of an education. All of these practices represent other examples of contemporary prejudices against girls in India. Undeniably, these traditional practices must change, but above all, the social attitudes accompanying these practices, that have been embraced by the people of India for centuries, must also change. Otherwise, it will be virtually impossible to enhance the status of women in this country, and the plight of the unwanted sex will continue.

Overall, Christine. *Ethics and Human Reproduction: A Feminist Analysis*. Boston: Unwin Hyman, 1987. 245 pp.

Overall analyses the moral questions concerning human reproduction and new reproductive technologies with special attention to social policy issues. Some of the various topics that are covered include: sex preselection, artificial insemination, prenatal diagnosis, abortion, in vitro fertilization, embryo transfer, surrogate motherhood, and childbirth. Overall takes a feminist approach to respond to some of the questions about reproductive rights and the effects that reproductive technologies will have on women and children. In her critique of antifeminist and nonfeminist's approaches, she argues that women's sexual and procreative power are exploited to accommodate patriarchal interests. Feminists acknowledge women's experience in all areas of reproduction by exercising their own freedom and choice, by controlling their own bodies, and by taking responsibility for their own actions. Also, feminism raises questions and challenges assumptions associated with reproductive practices. "Why are women advised to endure the pain, uncertainty, and disappointments involved in *in vitro* fertilization, as a "treatment" for a low sperm count in their husbands, when artificial insemination by donor is easier, has a higher rate of success, and is pain-free?" This question, similar to the many others raised in the book, examines critically the assumptions usually taken for granted in discussions dealing with reproductive technologies and focuses upon the potential effect that they will have on women and children.

Overall, Christine. "Reproductive Ethics: Feminist and Non-Feminist Approaches." *Canadian Journal of Women and the Law*, 1, 2 (1986): 271-279.

Reproductive ethics is a sub-discipline of philosophy that concerns itself with a broad range of moral questions related to human reproduction. In this paper, the author contrasts feminist and non-feminist views on reproductive ethics. A non-feminist approach is defined as one that overlooks women's experiences in exchange for male perceptions and interpretations; it shows little or no awareness of past or present oppression of women; and consequently, it fails to reduce historical patriarchal control over women, whereas the feminist approach attempts to address all of these issues. Furthermore, the author offers some specific examples of the characteristics of these approaches with respect to



continuation of the pregnancy constitutes a threat to maternal life or health. In conclusion, the author argues that there is not, as of yet, a sufficient legal basis for fetal protection. Therefore, a judicial order of fetal protection prior to birth undermines women's self-determination, and it would be inconsistent with the principles of sexual equality, that women have been struggling to attain for decades.

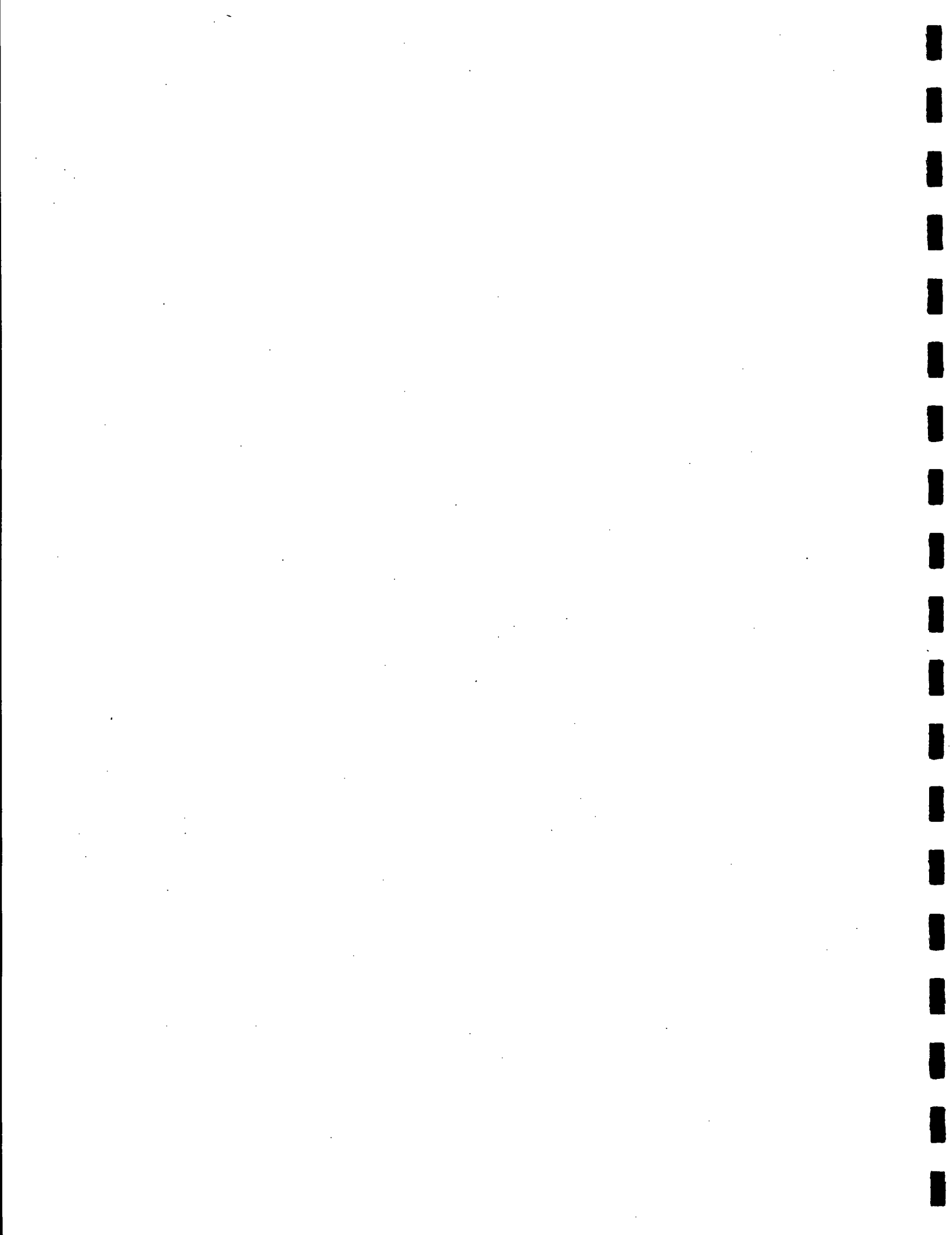


Clarke, Adele. "Subtle Forms Of Sterilization Abuse: A Reproductive Rights Analysis." In *Test-Tube Women: What Future For Motherhood?* Edited by Rita Arditti et al. London: Pandora Press, 1989, 188-212.

In this paper, reproductive rights activist Adele Clark points out ten of the most common forms of subtle sterilization abuse. Subtle sterilization abuses include situations in which women or men legally consent to sterilization, but the social conditions in which they do so constrain their capacity to exercise genuine reproductive choice and autonomy. Subtle abuses are international in scope, and they are becoming more and more common in today's society. The forms of subtle abuse that Clark points out are: lack of abortion options, unnecessary hysterectomy, economic constraints upon reproductive choice, lack of knowledge of the permanence of sterilization, lack of knowledge or access to other means of contraception, simultaneous sterilization and childbirth or abortion, iatrogenic (medically-caused) sterility or infertility, disproportionate sterilization of welfare women, ideologies of "appropriate" family size and structure, and lack of counselling to prevent regret of sterilization. She concludes with a list of recommendations that take into consideration the interrelationship of social, medical, personal and political issues. The list includes enhancing women and men's knowledge of all forms of contraception, improving the monitoring and enforcement of the existing federal, state, and city sterilization regulations, and broadening the understanding of the permanence of sterilization. These recommendations, along with the others mentioned, would help in the process of achieving reproductive freedom for all.

Corea, Genoveffa. "Egg Snatchers." In *Test-Tube Women: What Future For Motherhood?* Edited by Rita Arditti et al. London: Pandora Press, 1989, 37-56.

This article describes the process in which human eggs are obtained for experimentation. The author discovers during a visit with a famous biologist that women are bought, used and discarded much like laboratory animals. Many doctors today are advocating preventive ovariectomies (the removal of healthy ovaries) to receive the eggs for the purposes of reproductive experimentation. A few cases were cited in which patients were given Pergonal to force their ovaries to produce many eggs, which would then be taken out by their doctor, in many instances without their consent. Also, the author discloses some of the companies currently in the reproduction industry: frozen sperm banks, banks for frozen animal eggs and embryos, international associations for transferring embryos in farm animals, clinics for inseminating surrogate mothers, and sex predetermination clinics for choosing the gender of a baby. The reproduction industry splits the functions of motherhood into smaller parts, which reduce the power of the mother and her claim to the child. The author concludes by stating that the reproductive industry limits women to the role of a surrogate and a social mother, thus she would function under man's control.

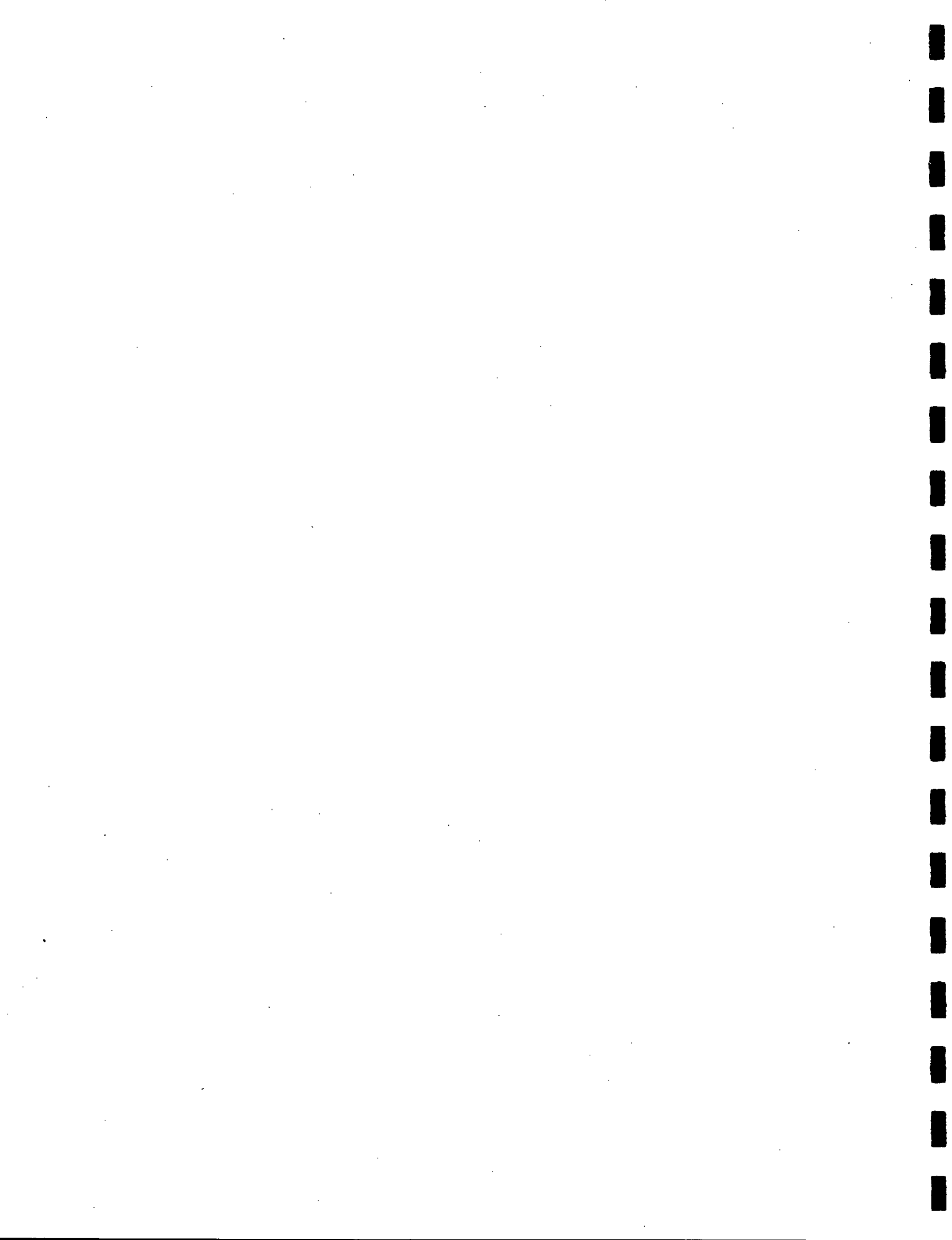


Katz Rothman, Barbara. "The Meanings of Choice In Reproductive Technology." In *Test-Tube Women: What Future For Motherhood?* Edited by Rita Arditti et al. London: Pandora Press, 1989, 23-33.

The advances in reproductive technology offer women a considerable amount of choice. However, as Rothman points out, there is a negative side to these new possibilities because the new technology limits a woman's ability to choose. With advance fetal monitoring, mothers can be informed of any disability or disease affecting their child, and choose whether or not to continue their pregnancy. The author discusses a woman's right to make this decision, as well as the social and economic factors contributing to their "free" choice. Reproductive technologies can be used to empower women, but can also be used to enslave them. New technologies to aid the infertile involve dangerous experimental drugs and surgical procedures, not to mention the psychological trauma, and creates an enormous burden for wanting parents. As the author states, these procedures still leave more than a third without pregnancy, so to these people their sense of inevitability of infertility is substituted with the choice of giving up. Moreover, the decisions that women make are dictated by the social structure. The needs of women to be mothers, to have smaller families, and to have perfect children are some examples of the social framework in which women make their choices. Rothman concludes that women will never be able to make free, unstructured reproductive choices. A woman's right to choice and to information should be examined in the context of the social system that structures her choices, and not solely by individual rights.

Minden, Shelley. "Designer Genes: A View From The Factory." In *Test-Tube Women: What Future For Motherhood?* Edited by Rita Arditti et al. London: Pandora Press, 1989, 92-98.

The author discovers that even though laboratories working on genetic manipulation are run by male experts, the majority of the work is done by women technicians. Their experiments on genetic manipulation, or as the author calls it "designer genes", involves artificially creating genes that are then inserted into an embryo in order to "correct" the genetic make-up of the child. Once this technology is achieved, specific undesirable genes can be identified and altered. One of the greatest benefits will come when scientists are able to locate a specific gene known to cause disease and exchange it for a normal one. However, many political issues arise with this technology: What genetic conditions will be considered "undesirable"? Who will decide these conditions? What options will be available to women? Will women be informed to make the proper decisions so that they do not subject themselves to dangerous risks? Minden concludes that women will be told, by medical researchers, what kind of children are acceptable for women to give birth to. Consequently, the author thinks that women should become more prepared and more informed, in pace with the new technological developments.

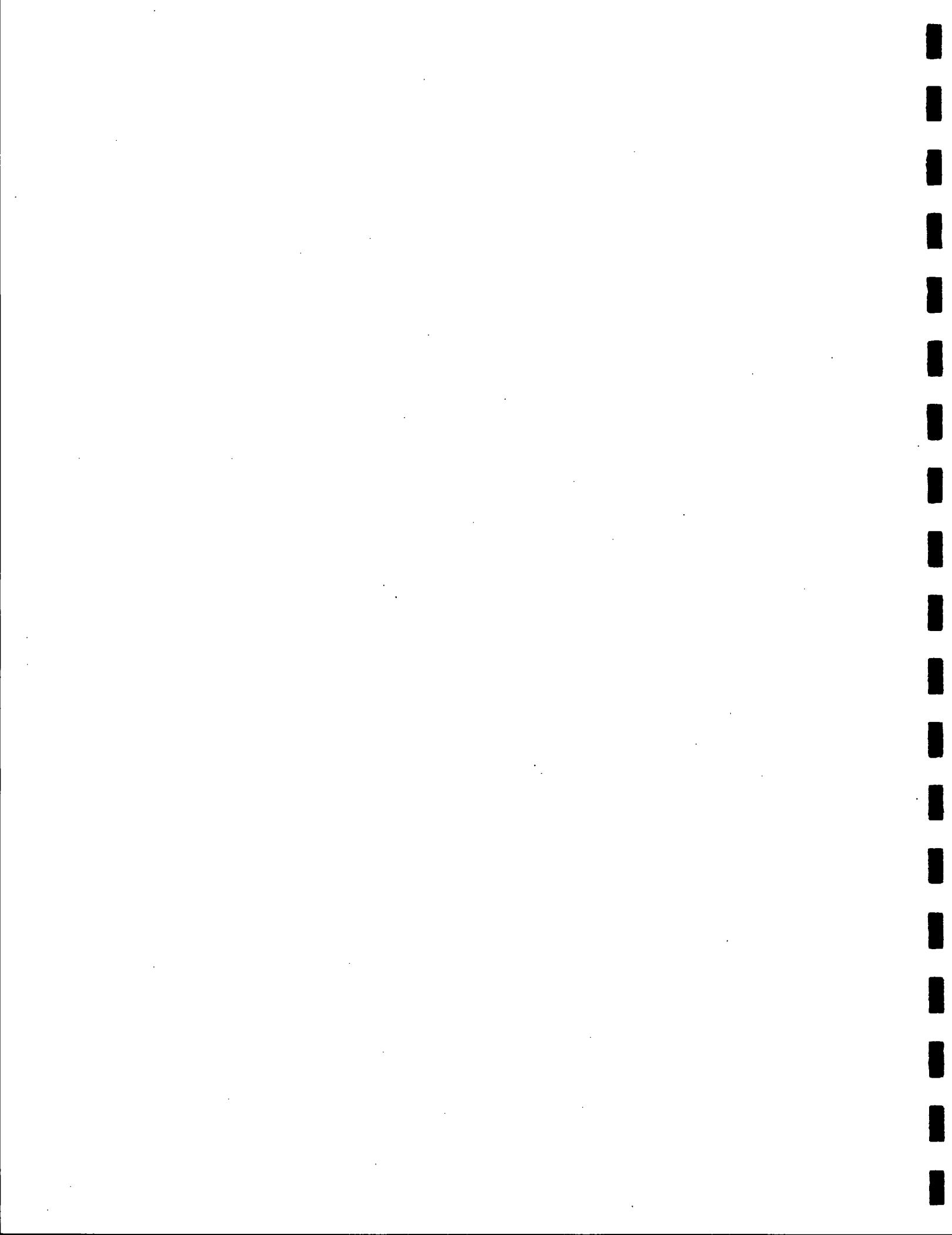


Pollock, Scarlet. "Refusing To Take Women Seriously: 'Side Effects' and the Politics of Contraception." In *Test-Tube Women: What Future For Motherhood?* Edited by Rita Arditti et al. London: Pandora Press, 1989, 138-152.

In heterosexual intercourse, the responsibility of contraception is usually placed in the hands of women. However, this article discusses the various methods of contraception and their side-effects that are easily dismissed by doctors as "natural" for females, such as: headaches, high blood pressure, depression, low sex drive and vaginal discharge. Only when the side effects become life threatening do doctors recognize them as serious. The author talks with fifty women in England and is surprised to find that almost all of them lacked any practical knowledge before they used birth control. Similarly, almost all of them had used the pill without any prior knowledge of any possible side effects. Many of these women share their personal experiences, providing a critical look at medical practices and the refusal of doctors to take women seriously.

Trawick, Eleanor. "Teenage Oppression and Reproductive Rights." In *Test-Tube Women: What Future For Motherhood?* Edited by Rita Arditti et al. London: Pandora Press, 1989, 131-137.

The reproductive rights of teenagers are hindered by the oppressive sexist and homophobic lifestyles that limit their freedom. A teenager herself, Trawick challenges many of the traditional assumptions that dictate teenager's position in society. She appeals to teenagers to fight for their reproductive rights, which would start an entire teenage rights movement. Her attack on the "traditional" family leads to a discussion about what is considered "moral" behaviour concerning the proper relationships between men and women. Minors have no power because they have no economic role and are wards of their parents. This lack of power means teenagers usually end up using contraception with little or no information because society believes that by keeping teenagers naive they will protect them from the "bad elements" of society. As a lesbian, the author also addresses the struggle of gay teenagers and the issue of gay liberation.

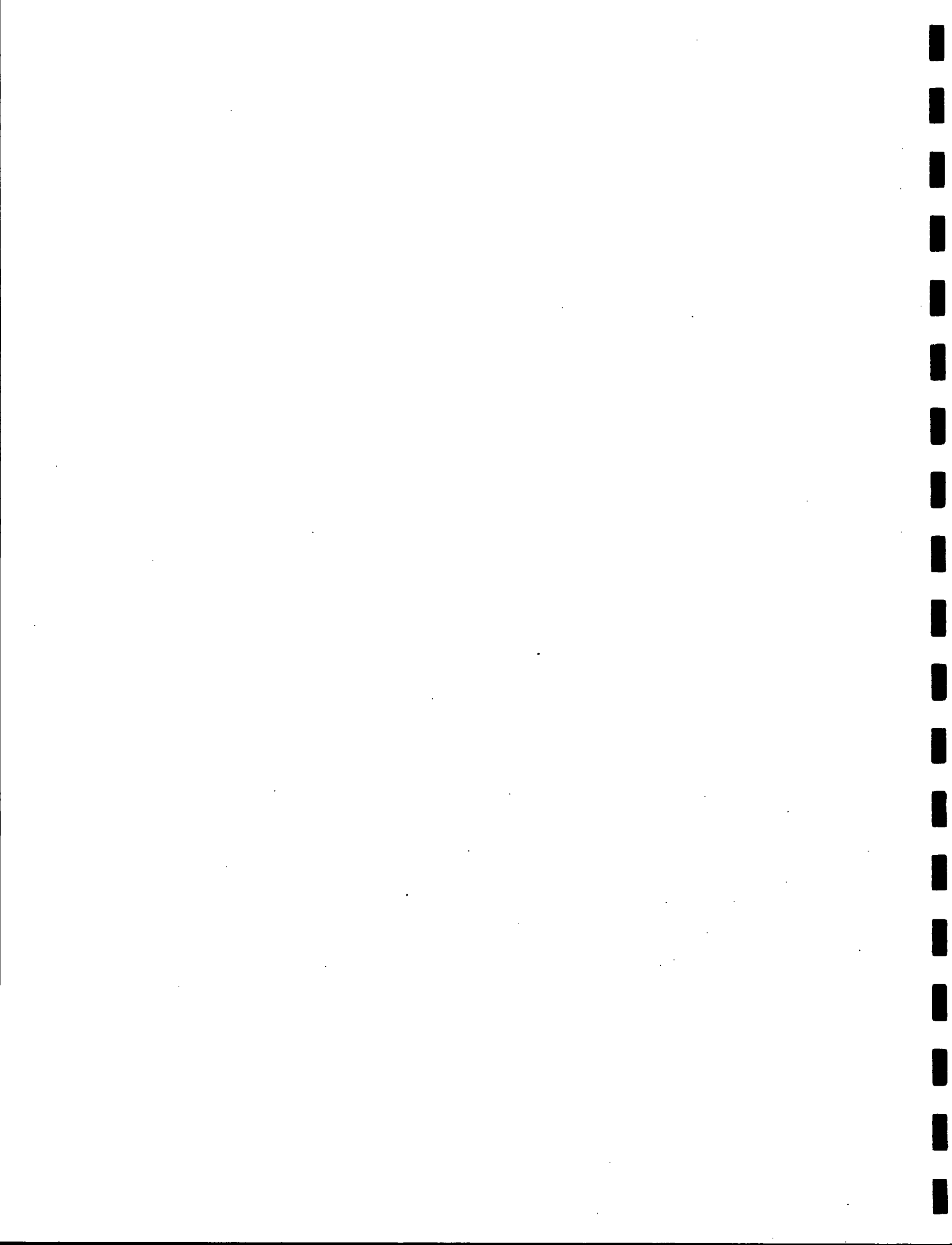


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