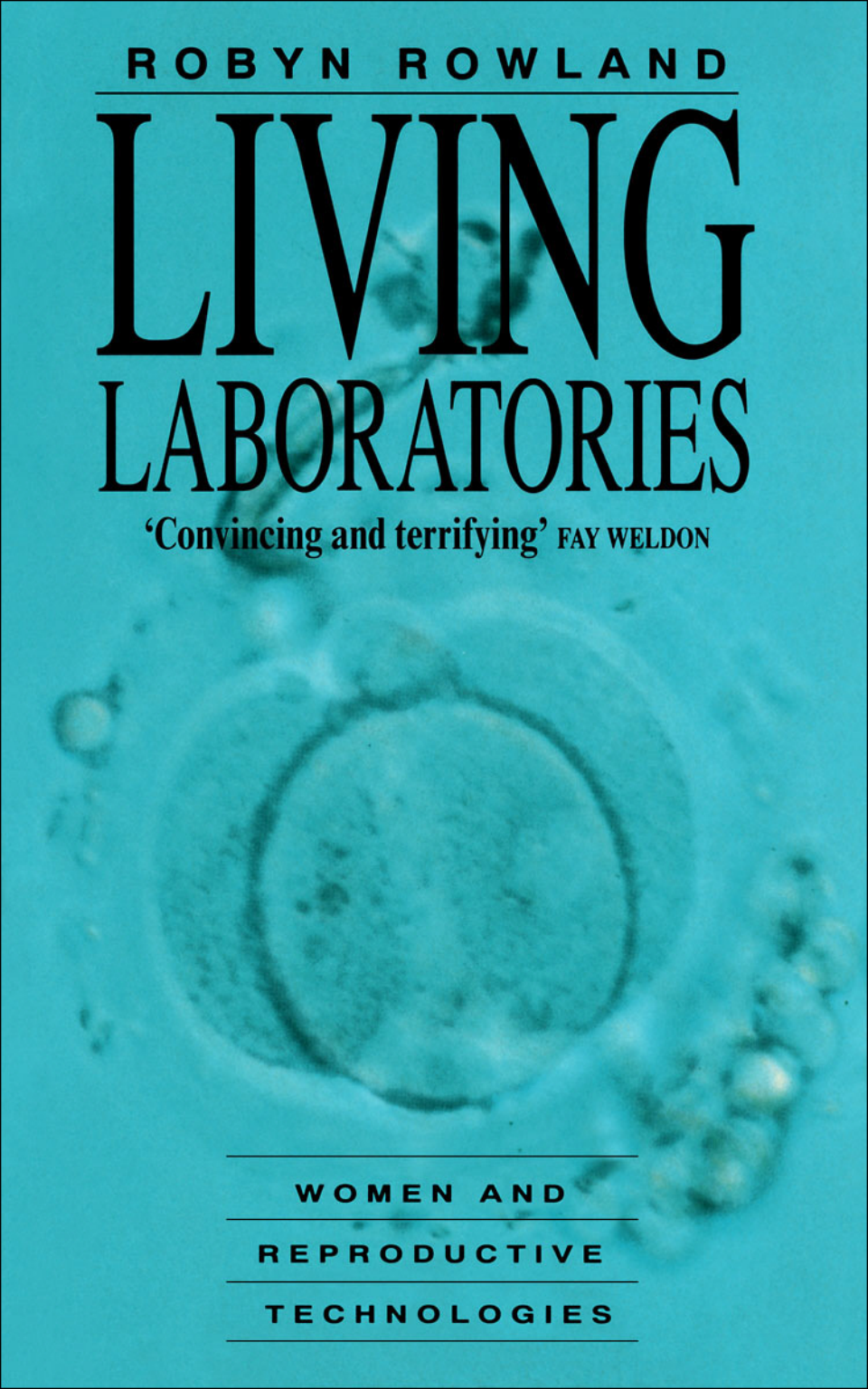
ROBYN ROWLAND

LIVING LABORATORIES

'Convincing and terrifying' FAY WELDON



WOMEN AND REPRODUCTIVE TECHNOLOGIES

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ROBYN ROWLAND

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For the Rainbow Lorikeet

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ACKNOWLEDGEMENTS

In the ten years since I began work in this field, a great deal has changed in the human capacity to interfere with procreation. In 1984 when I coined the term 'living laboratories', I was concerned about *in vitro* fertilisation—now the term has a fuller meaning explored in the following pages. In the struggle to understand what science is doing and to develop an analysis of it *as* it occurs, I have been partnered by many women who have inspired and collaborated with me. Renate Klein has given me a friendship based in powerful collaborative work, a partnership without competition which once again makes a lie of the myth that women can't work together. Christine Ewing has been both friend and confidante and has brought to my analysis a scientific challenge which has informed my position. For their love and friendship I will always be grateful.

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Some women cannot be named because they work in jobs where their political positions cannot be made publicly known. I thank you all.

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My mother Gwen, before she died prematurely in 1990, was a constant source of newspaper clippings and arguments. Her courage, intelligence and sensitivity taught me much. Her love and support, and her increasing understanding of the outrageous devaluing of motherhood, made me see that there is a truth worth fighting for. It was a privilege to support and nurture her in her dying.

My father Norm has always inspired me with his sense of community duty, his unstinting devotion to housing for the aged, and his ability to weigh the pros and cons of an argument. His continuing faith in the possibility of a just world and his abhorrence of violence towards others has been a sustaining part of my own value system. His love is part of my daily strength.

Finally, I thank Nigel Wood for his love and partnership. We met over our outrage against IVF Australia and continue to share a commitment to social change, a belief in a future that is not in the control of dehumanising forces, and a political activism that changes its form but not its intent with the years. He has listened to the ranting and raving, the reasoned argument, and the pain I felt when political campaigns became personal and the rumours and innuendo hurt. Though our lives are difficult to organise, the constancy of his being part of mine and I of his is the solid foundation I treasure.

INTRODUCTION

REPRODUCTIVE CONSCIOUSNESS: THE LOSS OF INNOCENCE

Imagine women coming to maturity in the next century— less than a decade away.

> These will be women who, from their earliest days, grew up with IVF, embryo transfer, surrogate motherhood, artificial wombs, and sex predetermination technologies. They will be women who have never known a world without 'superovulation' and 'ovum capture'. From childhood, these women will have watched television news reports involving the 'Storage Authority', that is, the board in charge of frozen sperm, eggs and human embryos.
>
> They will be women whose own 'mothers' may have supplied the egg from which they were generated, *or* the uterus in which they were gestated, or perhaps neither. These women of 2050 will know that among women, there are egg donors and there are breeders or gestators and there are those who provide various body parts and fluids used in reproduction (for example, urine from which hormones are extracted for use in superovulating the ovaries of younger females). But no one woman procreates a baby all by herself. This will be so because by 2050, use of the new reproductive

> technologies will have expanded beyond the original category of women— the infertile—for whom it was first touted.
>
> This, then, might be the reproductive consciousness of our daughters in the 21st century: 'Reproduction is a complicated intellectual and technical feat performed by teams of highly skilled men who use, as raw material for their achievements, the body parts of a variety of interchangeable females'.[1]

This vision of our future may seem shocking, yet it is certainly feasible. When talking to high-school students about reproductive technology I usually end by looking at a conversation a journalist had with Dr Brinsmead of Newcastle University in which he said: 'A fetus that is not even born could ultimately have children'. He explained that immature eggs could be harvested from a female fetus at its fourteenth week, brought to maturity, mixed with sperm, and used to create a child.[2] At the moment, students respond to this with disgust, calling it 'repulsive', 'horrifying' and 'unnatural'. They are shocked and revolted, just as their parents would have been merely ten years ago if they knew that by the 1990s there would be storage banks of frozen human embryos in most major countries of the world. Yet the same students readily accept the existence of these banks and the fact that sexual intercourse is not the only way of having children. Already their sense of how humans are created is vastly different from that of their parents—just as ours is different from our parents'. We have all been affected by the softening-up processes which mould our reproductive consciousness, reshaping our sense of how people are and should be created. Few people in the 1990s blink when they hear the words 'test-tube babies', and terms like 'in vitro fertilisation' (IVF) and 'cloning' are commonly used even though it is less than two decades since the first IVF baby was born in England.

Yet despite the continuing development of the new reproductive technologies, people remain basically in the

dark about how they work and about the continuing research which pushes so-called benign technologies into the more bizarre areas like Brinsmead's concept of the 'fetal mother'. They are not aware of the high failure rates and costs of the technologies both to individuals and society. The social effects are masked because the technologies are presented as a solution to individual problems. Subtly, step by step, we are changing the nature of being human and eroding the control which women have had over procreation. In its place, male-controlled technological intervention is beginning to determine how children will be conceived, what kind of children will be born, and who is worthy of receiving these new products of our science.

CHANGING SOCIAL VALUES: COMMODIFICATION AND CONTROL

There is a common belief that ideas or theories are somehow separate entities inhabiting a place called academia, remote from reality. So the scientific control of reproductive technology is often debated as if it is an intellectual exercise, while in the laboratory and in the market place increasing scientific control over procreation continues. At the same time we accept an increasing commodification of all things. Education, knowledge, information are now 'products' to be bought and sold, along with the new 'products of conception'—which used to be called 'children'. Even the 'self' is packaged and marketed in courses on how to 'sell yourself'. The ideology of family is used to sell reproductive technology, with babies up front as the sales pitch. Babies sell products; babies become products. One newspaper account exemplifies this when discussing so-called 'surrogate' mothers:

> Its first product is due for delivery today. Twelve others are on the way and an additional 20 have been ordered. The 'company' is Surrogate Mothering Ltd and the 'product' is babies.[3]

The precedent for this has been the packaging and selling of woman as object. Advertising uses women's bodies and sexual availability this way, and an entire industry of pornography reaps its profit from this objectification. With the new reproductive technologies women are further objectified and fragmented, dismembered into ovaries and eggs for exchange and wombs for rent. The commodity 'woman' or a part of woman can be used to produce the commodity 'child'. And the product had better be perfect. As Herbert Krimmel wrote, 'It is human nature, that when one pays money, one expects value'.[4]

The product will be 'man-made' *(sic)* and therefore better than nature; and because our society does not accept the imperfect, women will be placed under more and more pressure to use all technological means offered to secure perfection. Less and less assistance will go to those who make the 'mistake' of having an imperfect child. So in the age of the perfect product, difference (named 'defect' or 'abnormality') will be less and less acceptable.

Implicit in this is our increasing desire for control—control over nature, genetic problems, difference, ageing, death and fertility. Men in power, the makers of ideas and systems of control, construct a make-believe world in which 'free choice' exists, in which individuals supposedly make choices about their lives unhindered by social responsibility to others. In this view of society, the way power works is subtly hidden behind claims for personal autonomy.

Belief in human control is used in order to reduce human fear of risk. But risk—risk of being hurt, of death, of a handicapped child, of a sudden disability or illness—is in the nature of life. The 'control myth', the myth that we have choice, leads people to believe that they are free, that there is no need to challenge those in power.[5] It also places responsibility for the down-side of the world—poverty, illness, domestic violence—on the individual and not on structures of power. The illusion of freedom is a powerful control mechanism (see Chapter 8).

Though our whole society is changed by the new reproductive technologies, initially they affect women most intimately. A history can be traced of the continuing battle between the two social groups, men and women, over the control of women's fertility and procreative potential. This battle is also drawn around race and class lines, and governments constantly develop systems structured to control which women have children, when, how and how many. The new reproductive technologies extend their power to do so in ways unimaginable a few decades ago.

Mary Shelley, at the age of nineteen in the book *Frankenstein* (1816), saw the perils of this enterprise. Frankenstein, the creator of a monster, lacks the imagination to envisage the implications of this desire to control the creation of life. Thinking only of his own expected glory, he muses to himself:

> a new species…a new species would list me as its creator and source; many happy and excellent natures would owe their being to me. No father could claim the gratitude of his child so completely as I should deserve theirs.

His monstrous creation, who seeks only companionship and love, eventually destroys those loved by Frankenstein, and in the end the creator himself. In his suffering the monster cries:

> Oh earth! How often did I imprecate curses on the cause of my being! The mildness of my nature had fled, and all within me was turned to gall and bitterness.[6]

In the popular imagination, he has taken on the name of his creator, Frankenstein, conflating the scientist with the monstrous. How visionary has Shelley's work been?

CRUMBLING MOTHERHOOD: MEN AND THE CONTROL OF REPRODUCTION

Women have mothered within patriarchal structures, in societies where men as a group have made the laws, constructed and controlled ideology, run the economy and structured social frameworks such as the nuclear family to suit their own needs and to maintain their power and privilege relative to women. As Carole Pateman points out, paternity 'refers to a form of political power'.[7]

Under patriarchy, dominance and control are defined as strength; compassion is defined as weakness. There is a deification of 'objectivity', yet it is a guise for male subjectivity. Masculine definitions of power stress domination rather than empowerment, and individual decision-making is lauded over informed consensus. Objects are valued above relationship. The control of women and children becomes essential to the definition of manhood—indeed, the powerful need the powerless, to substantiate their power and their 'right' to it.

In the relationship between men and women as social groups, patriarchal values and structures effectively set the limits of women's choice. Social institutions such as the family reinforce and maintain the patriarchal system. The economic system, where women are forced to be either totally or partially economically dependent on men, also shores up masculine power, as does the legal system, which legislates women's contractual obligations to men yet fails to contract men's responsibility to women and children (see Chapter 7).

Ideologies, or belief systems, support these social structures, so that the less powerful come to believe that the relative differences in power are natural and acceptable. Men as a social group work to convince women that they are 'naturally' worth less, are 'naturally' mothers, and so must 'naturally' be responsible for domestic labour.

These ideologies keep women tied into economic dependence and domestic, physical and emotional servicing of men. People develop within ideologies to which they are so accustomed that they do not question them. Some of the 'control' myths about women are: that they should be selfless and self-sacrificing; should be 'for' men in a sexual, economic and emotional way; are less able, intelligent, creative and powerful than men; and are in a position of lesser power because of a 'natural' inclination. Moreover, to be a 'good' woman, a woman really ought to be a mother.

Men limit women's power by controlling their access to resources such as money, time and physical strength, but also to other economic resources and social resources such as the law; from their position of power men can reward women by giving them access to these resources, or withdraw access as a punishment.[8] While women are constrained socially, these power plays also operate on a personal daily basis: the politics of intimacy between the sexes may include anything from the power to influence or make decisions about holiday journeys to the minutiae of non-verbal communication.[9]

In her analysis of the social contract which establishes civil society, Carole Pateman argues that the original social contract is sexual, giving men political right over women and sexual access to them. I would argue further that inherent within this sexual and social contract is the reproductive contract. Marriage is established not only to allow men sexual access but also reproductive control. Men have always been concerned with controlling women's fertility and the 'products' of that fertility. That control has ranged from laws which circumscribe women's access to contraception and abortion to religious and political controls which set the appropriate rates of reproduction for women.

Historically, there has been increasing control by men over women's reproduction. There is a history of the elimination of women healers by a rising male-dominated

medical profession and the encroaching of this profession into women's control of birth.[10] That control, extending to control over pregnancy and now conception itself, has dangerous implications for women.

There are a number of reasons why men want to control women's fertility and reproduction. First, at a social and political level, people can be seen as a resource. Reproduction, Elizabeth Moen argues, is 'a political and economic act with enormous public consequences, and this is the major reason for the control of women'.[11] She outlines political motives for fertility control such as the need of minorities to increase their numbers in order to develop a stronger power base; the desire in some non-industrialised countries to increase their size to counter in some sense the power of Western capitalism; the reduction of fertility in other overpopulated countries in order to increase per capita economic benefits; and in terms of national protection a sense of strength in numbers. This kind of thinking can be seen in reverse in the current anxieties expressed by Western nations about increasing so-called Third World populations.

Second, at the individual level, in some societies, fathers have benefited materially from the labour of their children. This has been true in countries such as India, but also in Europe and the United States of America.[12] Fathers can see children as an investment for later life, and therefore a resource worth controlling. Judith Lorber has indicated that this has always been a fundamental conflict between women and men:

> Who makes decisions for whom depends on who controls scarce resources, and children are probably the most precious scarce resource. Because of the physiological and emotional centrality of the mother-child unit, the way men can gain control of the means of reproduction is to have women under their domination… Lack of intense paternal investment or

> not, men in our society seem to want children of their own. They must, therefore, maintain some control over the reproductive capabilities of women.[13]

Finkelstein and Clough noted Smith-Rosenberg's argument that this desire for the control of children is 'characteristic of material societies, particularly those societies where the status of the child's legitimacy has consequences upon the distribution of private property'.[14] This would apply to most Western countries where inheritance is usually through the male line and the male heir is seen as a younger representation of the father, both symbolically and physically. As children prospectively hold property rights, there is an increased necessity for men to strengthen their control over these children and therefore over the women who bear them.

Men also demand emotional servicing from women. They often lead their emotional lives vicariously through their wives. When a child comes into the relationship, because of its total dependence and vulnerability, a woman's attention and emotional giving is drawn to the child and of necessity away from the father. A struggle for the woman's attention is created between father and child, and because of this men need to exert control and authority over both mother and child.

Third, in an analysis of consciousness, the male desire for control springs from male alienation from childbirth and procreation. Psychoanalysts have written extensively on the theme of womb envy. Freud's case studies document fantasies by men and boys for women's organs and functions. Anecdotal data abound concerning boys' desires to develop breasts and to give birth.[15] Men's fascination with and envy of women's procreative ability has also been represented in myth and rituals. For example, in some societies *couvade* is the male imitation of childbirth which can include the mutilation of the penis to resemble a vagina and male imitation of the pain of childbirth to the point where the father-to-be actually takes to his bed. Myth also

represents male desire to control reproduction. The Greek god Zeus gave birth to the goddess Athena by swallowing her mother and giving birth to her through his head; he also sewed Dionysus into his thigh in order to carry that pregnancy to term.

Though men initially thought the mystery of pregnancy and birth lay entirely within women's hands, once they realised they had a role by delivering the seed, they attempted to inflate this role. Early scientific anatomists actually concealed their observations that women contributed to the fetus. 'Their rationale was that as Nature had hidden from sight the sexual organs of women, so women's contribution to a new life also should be concealed.'[16] In the seventeenth and eighteenth centuries, scientists developed the belief that sperm carried within it the minuscule human being, the homunculus. The woman was merely a vessel that cared for the developing male seed.

Men and women experience reproductive consciousness differently. The fact that men provide only the seed in reproduction ensures what Mary O'Brien calls their alienation from genetic continuity.[17] Because women bear the child and labour at birth, that have had (until recently anyway) the certainty of their essential participation. As Carole Pateman has written:

> No uncertainty can exist about knowledge of maternity. A woman who gives birth is a mother, and a woman cannot help but know that she has given birth; maternity is a natural and a social fact… Unlike maternity, paternity is merely a social fact, a human invention.[18]

Men, excluded from this certainty, have tried to annul their alienation from reproduction by the 'appropriation of the child'. O'Brien sees this experience reflected in obstetrics, to which men have brought 'the sense of their own alienated parental experience of reproduction, and have translated this into the forms and languages of an "objective science".[19]'

This alienation can generate a frustration which results in 'feelings of inadequacy, jealousy or hostility toward the female'; women are immortal in a way in which men are not. Women can regenerate themselves, but men need women in order to regenerate themselves. Azizah al-Hibri argues that men remake 'the female's womb and breasts, making them his and divorcing them from their biological functions' in sexual appropriation.[20]

These theories of alienation and envy in reproductive consciousness resulting in male control and violence towards women can be explored in the elimination of midwives by male midwives in the nineteenth century. That development represented the beginning of male-dominated medical control over pregnancy and birth. Through modern reproductive technology men limit their alienation and increase their control further. They are now capable of conception itself. They can take the egg in their hands and inject the sperm into the egg through micro-injection techniques. In this sense they become symbolically both mother and father to the in-vitro-created child. A man can rent a woman's womb to carry his child for him and in what Carole Pateman describes as 'a spectacular twist of the patriarchal screw, the surrogacy contract enables a man to present his wife with the ultimate gift—a child'.[21]

Importantly, as men decrease their alienation by appropriating conception itself—taking women's eggs from their bodies—they alienate women from their own reproductive processes, changing the certainty women once had about reproduction. No woman on a reproductive technology programme can know for sure that the egg or embryo placed back inside her body was that which came from her body.

Men are also appropriating the self of woman through this process. This is most obvious in the slavery of so-called 'surrogate' motherhood. The man is not buying merely a

service, but the woman herself. The service cannot be delivered unless the woman herself is delivered.

> The self of the 'surrogate' mother is at stake in a more profound sense still. The 'surrogate' mother contracts out right over the unique physiological, emotional and creative capacity of her body, that is to say of herself as a woman.[22]

Finally, the male desire for control of reproduction lies also in the nature of power itself. Being the dominant group, men expect to control all social resources, including reproduction. But women, the subordinate group, have had exclusive control over the process of pregnancy and birth. Men may deliver the seed but it is the processes of a woman's body which bring the embryo to fetal life, and then produce a live child. Men have only been able to experience that vicariously through women's discussions of it. Men cannot accept their exclusion and have constructed institutions to invade that realm of women's experience.

Supported by the ideology of the 'patriarchal family', the 'control myths' of self-sacrificing motherhood and womanhood, and male definitions of women as irrational, incompetent, defective, dangerous and an object to the male subject, men as a social group are using the vehicles of science, medicine and commerce to establish control over procreation. It is therefore within the power dynamic of the oppressed and the oppressor that men will not allow women to retain their monopoly over reproduction and birth. Discussing 'surrogacy', Pateman writes that:

> men have denied significance to women's unique bodily capacity, have appropriated it and transmuted it into masculine political genesis…thanks to the power of the creative political medium of contract, men can appropriate physical genesis too… Now motherhood has

> been separated from womanhood—and the separation expands patriarchal right. Here is another variant of the contradiction of slavery. A woman can be a 'surrogate' mother, only because her womanhood is deemed irrelevant and she is declared an 'individual' performing a service.[23]

Procreation and birth are a resource which women have and men want. All forms of creativity carry a certain power; in this instance, the resource of another human being is created as well as the subject of love and affection. Like all groups who 'own' a capacity such as this, women want to hold onto their exclusivity, which is part of the group identity of women. They are the group that has the potential for giving life. In a world in which not a great deal belongs to women, this has been something which does. If what was offered to women was a sharing in the joy and creativity and limited power of procreation and birth, they might view men's desire to enter the reproductive arena differently. But as it expresses itself in a destructive and woman-hating invasion of women and their bodies, it can never be welcomed.

In the process of trying to end their own alienation, men have made procreative alienation a reality for women, divorcing women from their wombs, eggs and embryos — from their own bodily selves and their sense of procreative continuity. They have made children products of the nexus between commerce, science and medicine, calling experimentation on women and human society 'therapy' and camouflaging the intention to map and control human genetics with the rhetoric of 'helping the infertile'. In this process women have become the experimental raw material in the masculine desire to control the creation of life; patriarchy's living laboratories.

PART 1

Motherhood, Medicine and Men: Who’s in Control?

1.
IN VITRO FERTILISATION: MAN MAKES THE EMBRYO

The first ‘test-tube baby’ born was Louise Brown, who arrived in England in 1978. She was followed in 1980 by Candice Reed, born at the Royal Women’s Hospital in Melbourne, though the research had been carried out jointly by this hospital and the Queen Victoria Medical Centre. The Monash University/Queen Victoria Medical Centre/Epworth Hospital IVF team headed by Professor Carl Wood introduced a new regime into IVF: they became ‘the most sophisticated test-tube group in the world by using fertility drugs’.[1] This marked the beginning of the worrying number of multiple births on IVF programmes internationally. The first test-tube twins were born in 1981 and in 1983 the first IVF triplets were born in Australia. The same year saw the first baby born through a donated egg in Australia and, in the United States, the first baby through embryo transfer from one woman to another.

Notably it was in 1984, the year Orwell made famous, that the first test-tube quads were born and the first major debate in Australia over the ‘ownership’ of embryos took place after the death of Elsa Rios. The Rios case was one in which a woman from outside Australia had been admitted to an IVF programme, had two attempts at IVF, left her frozen embryos in storage at Epworth Medical Centre and later died in a plane crash. It was a year before the hospital knew of the death of Mrs Rios and it opened up an enormous

debate in the community concerning the fate of these embryos.

In 1985 the first baby created by sperm extraction and IVF was born to the wife of an infertile man, and the first baby from a frozen and then thawed embryo was born in Australia. In North America, the birth of the first sex-predetermined IVF baby took place: it was a boy. In Israel in 1985 two women without ovaries became pregnant using a new method of hormonal treatment, involving the use of donor eggs and IVF.

In 1986 Australia produced the first set of twins from a frozen egg, as well as a child born to a woman whose sister had donated her egg. In 1986, the first test-tube quins were delivered by caesarean section in London. The following year the first grandmother who was used as a 'surrogate', through an IVF programme in South Africa, delivered triplets for her daughter. Finally in 1988, what is thought to be the first case of 'sister surrogacy' on an IVF programme took place in Australia, when a sister became the birth mother for a baby created from her sister's egg and donor sperm. In 1988 and 1989, scientists succeeded in carrying out the act of sperm penetration itself when micro-injection enabled them to force open the shell (zona pellucida) of the egg and inject one sperm to enforce fertilisation.

This brief summary of some of the historical moments in the history of IVF indicates the rapid speed of development of the technology and the way in which IVF has been used on an increasingly broad range of women.[2]

WHAT HAPPENS IN IVF?

> I remember the first embryo transfer I had. At the time there were visiting doctors from IVF programmes around the world, and I happened to be one of the guinea pigs going in for the transfer on the day they were at the hospital. It was

> embarrassing enough lying there with your legs up in stirrups without a room full of people staring at you and with a huge spotlight (theatre light) shining on your genitals! When my doctor said to me that after that day I would have an 'international fanny' I was really annoyed at this remark, and the innuendo that I should somehow be thrilled at the prospect of being seen by all these international doctors.[3]

These words of a woman undergoing in vitro fertilisation (IVF) present a very different picture to that popularly portrayed in the media. How has this experience become part of the so-called 'treatment' for infertility?

The original procedure in IVF was one in which the egg was taken from a woman, the sperm from her husband or partner and the two were put together in fluid in a Petri dish (hence 'test-tube baby'). If an embryo resulted it was placed back inside the woman's womb to enable implantation and possibly pregnancy. It was intended to be used by women who had blocked or diseased fallopian tubes.

Though this procedure is simply described, the practical experience of IVF is more complicated. Women who have usually undergone the exhaustive procedures of infertility testing, followed by the invasive procedures of IVF, talk about the frustration and irritation of the constant testing process: blood tests, urine tests, post-coital tests, ultrasounds, and visits to hospitals late at night and early in the mornings.[4] Mazor has described the testing process as intrusive and even 'assaultive'. She writes, 'Patients must expose their bodies for testing and procedures; they must also expose the intimate details of their sex lives and their motivations for a pregnancy to their doctors'.

Investigations often include:

> for the woman, a daily temperature measure to determine whether and when she ovulates; biopsies of

> the uterine lining during the phases of the menstrual cycle to determine its responsiveness to hormones; introduction of gas or dye into the uterus and tubes to check for blockage; direct visual examination of the tubes with an optic instrument (laparoscope) inserted through the abdomen; blood hormone assays, immunologic and chromosome studies; cultures to detect any infections that may prevent conception.[5]

Few women who undergo infertility investigation and treatment are prepared to discuss the processes in public because of their 'sordid and humiliating nature',[6] for example, during the post-coital test. This test supposedly enables the doctor to assess whether the sperm is viable in the woman's cervical canal and whether the mucus from the woman is resisting the passage of the sperm.

> Consequently, this test dictates that patients have sexual intercourse at a time specified by their doctor and then rush to the hospital. There the woman undergoes a vaginal examination during which the fluids around her cervix are sucked out using a cannula, a sort of straw, so that they can be examined under a microscope. In contrast to the techniques of in vitro fertilisation and embryo transfer, using a straw to suck seminal fluid from a prostrate woman's vagina is most unlikely either to appear shown step by step in a television documentary or to appear on the agenda of the meetings of government committees.[7]

Repeatedly women discuss the difficulty of 'making' their husbands have sex with them before the post-coital test. Some men just cannot perform according to the doctor's timetable and some find it humiliating and will not.

> I said, I have got an appointment at 10 o'clock, we have just got to do it. He refused. We had a terrible argument. He kept saying that sex should be a thing of beauty.

> I just said, that's too bad, you have got to do it now. There is no time for discussion. So eventually he stormed out. He left home. I remember him stomping to the end of the road, and as he went out, he knocked over the pot plant in the hall and the cat went scurrying and the soil went everywhere. That was at about 3 o'clock in the morning. Eventually he stormed back into the house and came to bed and we had another row. I kept saying he had to do it. Eventually he calmed down and agreed. I had to use the douche and while I was in the bathroom he made a cup of tea. Finally, we made it at about 4 o'clock in the morning.[8]

Often the test does not work. So many women have to undergo this procedure over and over again, the humiliation growing with each attempt.

> I had an endless process of post-coitals which became more and more degrading. I felt nothing much at all at first, but lately it has become demeaning, just going in and opening my legs and going through all that again. The more it goes on, the more undermined I feel, and the less I want to go there each month.[9]

The information given prior to these tests often fails to convey the nature of the experience involved. For example, one of the tests to determine whether the fallopian tubes are blocked is described as one in which 'dye is injected into the uterus and information obtained through low-dose, carefully monitored X-rays'.[10] Compare this bald statement with the following description given by a woman in West Germany:

> Totally unsuspecting, during the lunch break I made my way to one of the large X-ray practices in the city. Sitting on a sort of gynaecological examination couch, my lower body bared, I was greeted by the radiologist. A tearing pain went through me when he injected the 'contrast meal'. After the examination, blood was

> flowing from my vagina. Without a word, I received an intravenous penicillin injection and a prescription for penicillin tablets, which I was to take over the following days in order to prevent any infection of the lower abdominal region. When I left the practice, wobbly at the knees, I was quite decided not to do this. Two hours later, while I myself was examining a patient [she was a doctor], I was suddenly gripped by a cramp in my lower abdomen such as I had never felt before. I spent the next few hours curled up on a couch in my boss's room. How I cycled home that evening still remains a mystery to me. I then swallowed the penicillin tablets with an air of desperation. Subsequently I learned in discussions with other women that the pain and cramps did not only occur in my case, but are typical. This X-ray examination, the result of which showed no abnormality, was the prelude to the events of the following weeks.[11]

Such stories are related over and over again. The process is described by the woman as emotionally and mentally stressful and physically exhausting. There is little wonder that they often experience extreme depression throughout infertility treatment.

SUPEROVULATION

Women may have an embryo implanted which has come from their own egg, or from a donor egg, donor sperm, or a donor embryo; but whatever the method of selection of the embryo, all women who give eggs either for themselves or for other women are superovulated by taking fertility drugs—that is, the woman's body is made to produce more than the normal one egg per cycle, in what scientists call 'egg harvesting'.

Women who go through superovulation include the woman who is on a programme because of her own fertility problems, the woman who is donating an egg to another

woman who cannot produce eggs herself, and those who have been asked to donate eggs when they are undergoing a hysterectomy and in some instances have been offered a free sterilisation as an inducement. Egg donors may sometimes be relatives, as in the case of surrogacy/IVF between sisters, or donors may be anonymous, recruited through ads in the newspapers. Many of these women are healthy, fertile, and function normally. A regime of superovulation may also be used on women entering artificial insemination by donor (AID) programmes who are there because their husbands are infertile, with the assumption that the production of more than one egg might increase the chances of fertilisation.[12] 'Surrogate' mothers in the US have also been superovulated since at least 1983 in order to increase their chances of becoming pregnant.[13] Finally, the technique of micro-injection of a single sperm directly into an egg to assist infertile men requires the superovulation of their often healthy and fertile women partners to produce a 'harvest' of eggs and therefore embryos to increase the chances of successful IVF.[14]

Superovulation can lead to fifteen to forty eggs per cycle maturing, instead of the usual one. Women are given hormonal cocktails to induce this abnormal egg maturation, one of the regular ingredients being a drug called clomiphene citrate. This drug is best known as Clomid, which is marketed by Merrell Dow Pharmaceuticals, and as Serophene produced by Serono.

There is a debate in the medical literature about how clomiphene citrate actually works. Originally it was used to prevent ovulation, then it was seen to induce ovulation. In 1984 Merrell Dow indicated that 'the exact mechanism of action in humans is unknown, but it is postulated that Clomid acts by stimulating the output of pituitary gonadotrophins'. By 1987 the description is still tentative: 'the ovulatory response to cyclic Clomid therapy appears to be mediated through intense output of pituitary

gonadotrophins…'[15] The assumption is that clomiphene acts on the hypothalamus, a gland at the base of the brain which controls the pituitary gland, which in turn determines which hormones are released into the body. It seems that clomiphene is interpreted by the body as an anti-oestrogen and tricks the pituitary overriding 'mechanisms which allow for dominant follicle selection to occur', so that many eggs instead of one are ripened in the ovary.

But clomiphene alone was not producing enough eggs and sometimes did not encourage the ovary to release them once they were fully developed so it is now often used in association with other drugs. One of these is human menopausal gonadotrophin (HMG) which is a purified preparation of gonadotrophins extracted from the urine of post-menopausal women. It is often administered as Pergonal, and works directly on the ovaries. Women are also often administered a further stimulant, HCG (human chorionic gonadotrophin), often marketed as Pregnyl, to stimulate the release of the eggs. HCG also promotes implantation of the embryo, as it is the hormone produced by the developing embryo and later by the placenta. But when administered artificially, it is used to 'induce ovulation *at a precise time* [my emphasis] on IVF and related programmes'.[16]

New drugs are being developed which may be used in association with those above, such as that sold under the brand name Buserelin (Hoechst Laboratories) and Decapeptyl (Ipsen Bio-Tech). This drug actually throws women into premature menopause. Together with the drugs mentioned above, Buserelin makes it possible for scientists to control a woman's body cycles totally. One drug blocks the natural cycle, another stimulates the ovaries by working on the brain, and yet another stimulates the ovaries to mature and release eggs by acting directly on the ovary itself. One practitioner said, 'The aim of the treatment is to reimpose a normal rhythm over a disordered one, to recover

a virgin soil' *(sic)*.[17] It is used on 'poor responders'; that is, women who did not produce a lot of eggs when they were stimulated; and is also given to 'non-retrievers', those who only had a couple of eggs collected. Scientists indicate that Buserelin is particularly useful 'in women who prove resistant *(sic)* to other methods of treatment'.[18] It is unclear precisely how the administration of these drugs actually affects the complex reproductive system. Anne Rochon Ford quotes one American biologist as saying:

> The gynecologist/obstetrician is probably more of a medical empiricist than any other specialist; that is, the gynecologist administers hormones as a treatment because they work and not because there is a clearly-defined understanding of their action in the body.[19]

I will take up the dangers involved in using these drugs later in this chapter.

EGG 'HARVESTING'

Egg harvesting has usually been carried out via a laparoscopy. In this operation the physician

> places the woman under general anaesthesia. Then he pumps inert gas into her to distend her abdomen and provide room for him to move and work on the internal organs. He tilts her head down 20 degrees so the intestines fall back by gravity. He makes small incisions in the abdominal wall to allow the insertion of instruments among which is the laparoscope, a slender optical device. The instrument contains a bundle of quartz fibres able to transmit light in irregular paths and produce images by means of lenses and mirrors. Light is passed from one end of the device to the other inside the woman's body.[20]