Taking a Position on New Reproduction Technologies.

Practices and Discourses from within the Feminist Movement.

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Abstract

In this thesis, I propose a revision of various positions taken by feminist study which aid us in considering the implications of imminent technological changes, particularly in the fields of reproduction and sexuality. Using a feminist cartography to address the discursive and corporeal processes of techno-science may be useful in imagining the political action deriving from a power with implications for our desires and our identities, as women, as potential childbearers, as mothers and as subjects, or rather from our identities as multiples. To this end, my first endeavour will be to travel between various philosophies generated by the feminist movement on both a theoretical and political level, with the aim of accessing dialogues between society and technologies. In order to efface the technological change to which it found itself subjected, twentieth century society had to contend with a series of ethical, moral, political, legal and psychological dilemmas. Since the beginning of a century in which scientific interest focused upon biological reproduction as a source of power and knowledge, feminism, whether as the protagonist of events or simply as the critical resistance against them, has been present as a constituent force of the know-how which is sexuality.

Keywords: reproduction, sexuality, technologies, biology.

1. Introduction: cultural reproduction, or anthropological constructionism.

Since its origins, anthropological studies have worked within the paradigm of a great imaginary dividing line separating nature from culture, seeking in the process to explain how even natural norms are "performed" by cultural models. The anthropologist Verena Stolcke argues that the difference between nature and culture is as follows: *"So long as no social significance is invested in it, nature and culture represent two different spheres".*[1] (own translation). In our study, difference is important, and to this end, the dynamic which I propose is not only to relativism but, further to this, to identify the way in which many of the basic truths which we accept as natural are, at the same time, cultural constructions.

> *"The materiality of procreation is undeniable and, nevertheless, in human societies it is evident that it in no way is "natural". Social relationships directly affect this primary materiality"*[2]. (own translation)

The great majority of the questions motivating this study derive from this statement. In comparing different cultural systems, Susana Narotzsky demonstrates that it is possible to construct different materialities and explanations of procreation which directly affect our most empirical realities. It is crucial, in order to tackle our current reproductive system, to closely examine a varied amalgam of "primitivism" reproductive systems which shed light upon how "other" cultures organise sexuality, offspring, lineage, or gender division. For me, however, Western conceptions of reproduction are much more *peculiar* than any "exoticism" to be found in "other peoples of the world". Deeply ritualised and recently technologized, the high prevalence of patriarchal attitudes in western conception of reproduction derives from a dual thought system with different opposites and hierarchies (nature/culture, women/men, reproduction/production).

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[1] STOLCKE, V. "Las Nuevas Tecnologías Reproductivas. La Vieja Paternidad". In AMORÓS, C. *Mujeres: Ciencia y Práctica Política.* Madrid: Universidad Complutense. 1987, p. 63.

[2] NAROTZKY, S. "Procrear" In *Mujer, Mujeres, Género. Una Aproximación Crítica al de las Mujeres en Ciencias Sociales*. CSIC, Servicios Editoriales S.A. 1995 p. 60.

In the last two centuries, science has charged itself with the task of defining this binary system, focusing upon biological aspects of reproduction as key to this. The discovery of DNA, for example, made it possible to ascertain the "true" father of a baby, something no longer defined merely by being the husband of the mother, but instead now a question of biological responsibility. Biology is establishing itself as the supreme guardian of new family values.

If biology defied old religious structures, however, we may also say that new technologies are currently defying mandates previously established by biology as being natural. The donation of external genetic material to a couple, for example, produces offspring previously considered to be unnatural. Here lies the importance of anthropology: technologies are breaking the bounds of human existence, bounds which must be critically and creatively reinterpreted in order to enable us to adapt our vital rhythms to such processes of change.

Anthropology is currently seeking to confront the ontological opposition between the realm of materiality and the realm of sociocultural conventions, in a less dichotomous manner than that of modernity before it. Gayle Rubin paved the way for research focusing upon the social and political dimensions of sexualised life. I, like her, both of us deeply influenced by the work of Foucault, believe that so long as we continue to consider them a purely biological organisation, it will be impossible to reflect upon the politics of sex. Sex is always political and motivated by sociocultural values which determine that which is good from that which is bad, that which is permitted from that which is prohibited, that which is normal and acceptable (heterosexuality) from that which is deviant and punishable. The struggle over sexuality is thus a historical struggle:

> *"Sexuality should be viewed with particular interest in eras of intense social tension. (...).In this way, though sex is always political, there are historical periods in which sexuality is more intensely disputed and more openly politicised. In such periods, control of sexual life is, indeed, re-negotiated."*[3]
> (Own translation)

[3] RUBIN, G. *Reflexionando sobre el Sexo: Notas para una Teoría Radical de la Sexualidad.* P*lacer y Peligro*. Vance, C. Madrid: Talasa Ediciones, 1989 p. 114.

The current context of postmodern and global crisis brings to our attention the relevance of studying the interaction between new technologies and the body and human life. The fight for certain kinds of reproductive knowledge and power must expand into laboratories and hospitals in order to avail itself of the breadth of knowledge hidden therein. I consider these to be the spaces in which sexual politics are, in reality, being constructed today. Is it there that the rules of gender and ethnicity and forms of relationship are being brought into play, and there, therefore, that we would politically intervene if we wish to be part of the construction of that which defines us as "humans".

It is often believed that the concept of gender was invented by feminism. This is not the case, however. It arose in the medical laboratories of the 1950s, invented by Dr. John Money in order to tackle certain problems of intersexuality appearing in babies whose bodies could not be automatically identified as being masculine or feminine. This is indicated by the fact that since that time, medical institutions have been conscious that sexual difference does not exist; that there is a complex range of bodies and sexual morphologies, whilst attempting nevertheless to use a combination of surgical and endocrine technologies in order to move the body toward the man-woman binary. Donna Haraway argues that political formulations of feminism around gender arise *"through the construction of meanings and through sex and gender technologies in normalising, liberal, interventionist, therapeutic, empirical and functionalist biological sciences, in the United States especially, including psychology, psychoanalysis, medicine, biology and sociology"*[4] (*own translation).*

Accordingly, the concept of gender is a technical, medical notion of bio-political control which was not invented by feminism. A different issue is that feminist make a critical use of the concept in its efforts to remove women from the category of nature. Despite science's biological determinism, feminism aims towards social constructionism, the latter lending itself to intervention. Nevertheless, constructions of nature and the sex of women have become very difficult to theorise, and have been

[4] HARAWAY, D. *Ciencia, Cyborgs y Mujeres: la Reinvención de la Naturaleza.* Madrid: Cátedra. 1995 p. 224

relegated time and time again to biological immutability. Accordingly, sex/gender distinctions have had negative consequences for feminist theory, having been unable to historicise and relativize sex as well as the historical-political origins of the sex/gender system[5].

Since the 1980s, the theories of performativity compiled in the work of Judith Butler have seen the arrival of a concept of gender which mistrusts the very sex/gender system prompting its meaning to be reconsidered. The idea of one coherent identity, whether biological or constructed, is no more than a regulatory fiction of reality which, in addition, would be irrelevant to a brand of feminist practice which promotes responsibility in the deconstruction of identities. If anything possesses the ability to construct a female identity, it must be this identity which is reclaimed as a subject formerly objectivised by men and simultaneously deconstructed as a fiction which is constantly reconstructed.[6].

> *"the refusal to change or to continue to be a "gendered" man or woman is an particularly political insistence (...) the political and explanatory power of the "social" gender category depends upon the historical categorisation of sex, flesh, body, biology, race and nature, in such a way that the universalising binary opposition which gave rise to the concept of a sex/gender system (...) is collapsing into theories of articulated, differentiated, responsible, localised and consistent embodied in which nature is no longer imagined or established as a tool in culture, nor sex in gender"*[7] (own translation).

I will seek to conclude this chapter with a definition of reproduction as a field of relations, as a melting point, as the fusion between species and individual at which the perpetuation of life and death meet; a crossroads at which that which we call "human" is born. As I have attempted to demonstrate by means of anthropological approach, the context of New Reproductive Technologies is thus not pioneering, exclusive or original in considering a non-bisexual reproduction like that represented by cloning, or a

[5] Ibid. p. 229
[6]Peripheral or subaltern feminists entering feminist academia since the 1980s have pursued deconstruction of the category of woman as a single unit. (Hooks 1981, Mohanty 1984, Lorde 1982).
[7] HARAWAY, D. 1995 p. 249-250.

reproduction separated from sexual contact like that seen in assisted fertilisation. Though this may be true, means of conceptualising these new technological relationships are appearing once more to be undergoing a process of naturalisation by a scientific and legal system which is responsible for them.

2. Pioneers and visionaries: biomedical science and movements in birth control.

"Science must make women the owner, the mistress of herself.
Science, the only possible savoir of mankind, must put it in the power of women
to decide for herself whether she will or will not to become a mother"
Margaret Sanger

Modern methods of contraception are the product of the combined efforts of reproductive science and movements in birth control, population control and eugenics. In this chapter I propose a revision of the representation of the earliest feminist demands in the area of maternal autonomy through figures such as Margaret Sanger and Katharine McCormick. I will also revise the contributions of the early scientists and mavericks[8] that fought for the creation of an arena to raise reproductive issues within science.

In addition to the fight for the vote, the feminist agenda of the early 20th century demanded the right to accept or refuse to reproduce, or rather: voluntary maternity.[9]. Thus, the movement for birth control upon which I will be focusing in this study was born. Sanger, who coined the term and led the movement, promoted contraception as a radical idea linked to political change and to the individual emancipation of woman. Her activism was marked, particularly in its early stages, by civil disobedience. She was arrested for publicly defending contraception and distributing condoms.[10]. From the 1940s onwards, however, Sanger focused her energies upon expanding the movement

[8] The term makes reference to Clarcke A. "Maverick Reproductive Scientist and the Production of Contraceptives, 1915-2000. In Rudinow A., Oudshoorn N., Kirejczyk M. *Bodies of Technology. Women's Involment with Reproductive Medicine*. Ohio State University. 2000

[9] For a more detailed history about the vindication of voluntary motherhood: Gordon, L. "Voluntary Motherhood" In *The moral property of women. A History of Birth Control Politics in America*. Illinois. 2002, Pp. 55-71

[10] Prescribing of contraceptive pills to unmarried women was not legalised in USA until 1972.

into the scientific community, the only community capable of legitimising techno-medical intervention in reproduction. Sanger has often been considered a racist. The politics of birth control retain their close link to the history of the two world wars and the genocidal politics of the Nazis, but the accusations directed at Sanger relate above all to her efforts to include the prominent scientists of the era. In aligning herself with the medical world, including promoters of eugenics and other scientists with involvement in immigration control and sterilization policies, she often compromised her socialist ideals. Nevertheless, the strategy was a practical starting point in winning legitimacy for the movement. Sanger continually defended controlled contraception for women in order to increase their sexual autonomy (Clarke 2000, Tayle 2010, Gordon 2002).

With the implementation of new knowledge and techniques about reproduction, her perspectives found themselves without doubt progressively distorted. In 1942, for example, the Birth Control Federation of America, of which she was leader, changed its name to the Planned Parenthood Federation of America. The change was key: the guiding principle was no longer women but families; the liberation of woman was the liberation of the married woman[11]. In addition, science, in its eagerness to control vital processes, consistently refused to grant such control to women themselves. The simple techniques which women were demanding towards autonomy were stigmatized as inferior and pushed out by "increasingly scientific"[12] endocrine terminology. Due to its inappropriate, reproductive science was originally rejected by the mainstream physician[13] and instead financed by modern philanthropists and ultra-catholic white families who sought to increase their rate of births. Accordingly, with the exception of Sanger's small project, the project was never a policy to offer emancipation to women. The many services of contraception since the 1970s onwards have been nothing but important "secondary effects" of the original plan for population control.

In the search for funding, Sanger worked with her colleague Katharine McCormick, who whom she endeavoured to devise the pill, a form of fertility regulation managed entirely by women. This leads us to the figure of George Pincus, a scientist of

[11] TAYLER, E. *America and the Pill. A History of Promise, Peril and Liberation*. NY: Perseus Group Book. 2010. P. 57-58

[12] CLARKE, A. 2000 p. 54-57.

[13] Ibdem p. 39. She explains that one of the reasons for the scientific rejection of reproductive medicine was its close links to subjective behaviour. *"Reproductive scientists were unable to create the separation between science and society often desired by scientists"*

dubious reputation who conducted research into embryonic processes. The work of Pincus, a precursor to that known today as in-vitro fertilisation, was also consistently rejected by medical society. He must have been a man of ambition and tenacity in order to persevere in his research. Pincus accepted an offer worth millions from Sanger and McCormick to synthesise the hormone which suppressed ovulation. The discovery was a rapid one, but the real challenge was to find a group of people who would "voluntarily" participate in the trials. As McCormick stated: *"human females are not as easy to investigate as rabbits in cages"*[14].

In 1956, the investigation transferred to Puerto Rico. The island, an important figure in the bio-politics of the "micro-power", offered everything required: an enclosed population of high density, limited legislation, and black, uneducated women with experience of sterilization technologies. The pill offered a non-surgical and reversible method of intervention. In return, the women accepted an improvement in living conditions, including food and hygiene. By the end of the 1950s, the pill was available; technologies inherited from the war became domestic technologies or technologies of the body which would be of use in the sophisticated population control of the Cold War, which Foucault referred to as a *disciplinary dispositive*[15]. A further issue, as we shall see in the following chapter, is that the feminism of the 1970s made critical use of or used this developed technique to deconstruct traditional categories of sexuality.

3. Sexuality and reproduction in the 1960s and 1970s: the quest for possession of the body.

"Your body is a battleground"
Barbara Kruger

The traditional causal connection between sex and reproduction, established principally in heterosexual fiction, is breaking down thanks to reproductive and gender technologies. Such a molecular and technical break-up represents a completely different way of considering power to that proposed by Foucault. It is no longer a power invested

[14] TAYLER E. 2010 p. 29.
[15] FOUCAULT, M. *Historia de la sexualidad I: la Voluntad de Saber*. Buenos Aires: Siglo XXI, 2003

in an institution external to the body, as prisons or psychiatric hospitals were, but a miniaturised and domestic technique which may be carried in the pocket and swallowed[16]. With regulation of the pill, women began to directly ingest the bio-power which enters our body. I do not wish to alarm; we have always been influenced by power in some form. The difference, of course, lies in that previously, we inhabited spaces which controlled us; now, we are inhabited by them. The issue is not one of deciding whether we should or should not take the pill, but one of being conscious of the great meaning that we swallow when we ingest it. Just as I asserted in the first chapter, I consider familiarity with the socio-political history of these technologies fundamental, because they are the new methods through which the fictions of identity are constructed. In this chapter, I will deal with the relationship between technological advance and the exploration of the subject "woman" that is under construction.

The 1970s as a decade marked a period of search for and the reconstruction of the silenced element that women had been. Discussion around the female experience divided the second wave movement, particularly where women were asking themselves: What is it to be a woman? Is there something uniquely 'female'? Something which identifies us? If so, should one embrace womanhood, or reject it altogether?[17] In answering these questions, the attention given to corporeal experience particularly stood out. "Your body is a battleground."[18] The body began to appear not only as a useful tool in "representing" a body different to that assigned, but additionally as a disturbing element, or rather, as a method of accessing radically different experiences of one's own body, interpreted as a place of resistance. As we will see throughout this chapter, in a subversive experience such as the one described, technology would be a vital travelling companion in the feminist struggle.

[16] Beatriz Preciado explained at a conference on "Feminism and Bio-politics" as Foucault´s analysis is useful in the nineteenth century, but not today. The entire developments of micro-technologies that are inserted into the body differ from the large external structures of control and discipline in the form of panopticon. In Festival S.O.S., Murcia 2009.

[17] The sentence refers to the well-known De Beauvoir quote asserting that "one is not born, but rather becomes, a woman" and for this same reason, the political programme of women would be to "cease being woman", or rather, cease to be that which had historically come under the name of woman, as a social and cultural category. Luce Irigaray, on the other hand, directly accepted the "project" of being a woman.

[18] Artistic work of Barbara Kruger who used herself as a device in representing the feminist situation.

In 1967, the Food and Drugs Administration of America permitted the commercialisation and consumption of the contraceptive pill. From then on, as a legacy of the revolutionary movements of May '68, contraception began to transform the social order and sexual and gender relations in particular. Here, we see the picture of a struggle composed of two main axes that, though different, complemented each other in their demands; the construction of gender roles and distinction between sexuality and reproduction, which would prompt a host of feminist theory debated in the academies and other institutions.

On the one hand, the more liberal approaches found in the feminist mainstream emphasised the re-portrayal of that which Betty Friedan quite rightly described as "the feminine mystique": the model of a domestic woman promoted during the post-war period whose experience was the increasingly faultless care of household and family. The recently legalised methods of contraception were welcomed as support in the emancipation of the domestic sphere, transforming gender roles. The extent of the autonomy granted to women, controlling the prevention of pregnancy for themselves, was undeniable. But the "secondary effects" of the pill were soon noted by feminists of a more radical nature. The reinforcement of the Western nuclear family, the perpetuation of maternity as an individualist value, fears over the promiscuity of women[19], etc. As Elaine Tyler suggests:

> *"As it turned out, the pill did not solve all the problems of the world. It did not eradicate poverty, nor did it eliminate unwanted pregnancies or guarantee happy marriages. But it became a major player in many of the most dramatic and contentious issues of the last half of the twentieth century: the quest for reproductive rights; challenges to the authority of medical, pharmaceutical, religious and political institutions: changing sexual mores and behaviors; reevaluation of foreign policy and foreign aid; and women´s emancipation"*[20]

In a different way, her Marxist contemporaries more radically attacked male domination, whilst continuing to pursue technology as a source of liberation; liberation which was not considered uniquely in individualist terms of decision capacity, but as a

[19] TYLER, E., 2010 p.5
[20] Ibid. p. 6

collective fight of women as a social group. When the feminist revolution would triumph and women take ownership of the means of (re)production, the problems of woman as a class would be eradicated. Reproductive technologies would become part of the female domain, attacking the scientific determinism which medicine attributed to the body of women. We will study in depth the work of Shulamith Firestone, who revolutionised the feminist vision of the relationship between technology and reproduction.

3.1. Shulamith Firestone: the technological code of feminist revolution.

If non-maternity began to distinguish itself as a symbol of female rebellion, the defence of non-sexual and technological maternity, as Firestone proposed in 1976, must have represented a real shock even to the most revolutionary feminist. Her strategy was to attack the roots of sexual inequalities: reproduction, maternity, and family. The biological state of woman had to be radically transformed, and technology would offer the knowledge to do so.

"We currently have the knowledge necessary to create paradise on earth once more. The alternative is our own suicide through this very knowledge; the creation of fire upon earth followed by total oblivion"[21] (own translation).

She states that we have already everything necessary for this revolution and the problem will not be so much that which we lack but rather than which we have in abundance; the injustice of having been relegated to reproduction of the social order. Our own suicide as humans means that our moral, social and biological responsibilities must be eliminated; we must "*liberate humanity from the tyranny of biology*"[22] (own translation).

Women have been designed by nature for the purpose of reproduction; men, meanwhile, have shaped their own sphere of productivity with the aim of fighting the dialectic battle which they dominate, the dialectic of sexes. The balance of both in the

[21] FIRESTONE, S. La Dialéctica del Sexo. En defensa de la Revolución Feminista. Barcelona: Kairós. 1976 p. 301
[22] Ibid. p. 242

capitalist system is disproportionate, because women are expected to provide reproductive power in support of both sexes while men provide productivity for themselves. This dichotomous approach may appear to us today to be reductionist and simplistic, but it highlights an ageless debate over masculine and feminine principles whose difference lies in procreative capacity.

Firestone, distancing herself from any relativist and conscious interpretation of the different cultural constructions therein, sought to praise the biological base of all reproductive processes. Whilst class and even race divisions are based on an undeniable cultural bias, sexual divisions have a strong – but unchanging – biological base. Thus, she states: "*despite everything, conceding that the base of the sexual imbalance of power is a biological one does not have to mean the ruin of our cause"*[23] (own translation). If "natural" cannot be interpreted as a synonym of "humanity", nor can we to remain to biologically justify a discriminatory system, then "shedding" the nature in question is a question of pragmatically necessity. Reproductive technologies, including contraception, abortion, artificial insemination or artificial placentas aid us in overcoming this undeserved maternal link between woman and her offspring. The machine which Firestone was seeking to reclaim is a equalising machine (and therefore neutral), capable of radically redefining human relations based in the primary relation of one human with another of which the relationship between the sexes is composed. Men have greatly tampered with the natural balance, and it is thus necessary to re-establish an *artificial* human balance. Humanity should dominate over matter, or rather, dominate technological control to human ends. In this way, inequalities and oppression of human beings *"thanks to technology will see themselves eliminated, leading truly human life to be a reality for the first time."*[24] (own translation).

Firestone is conscious of the misuse of technology; nevertheless, as sinister as scientific-political interests may be, the true reason for which scientific investigation experiences little radical development is, simply, because humans are not capable of assuming the task of doing so. The masses, previously alienated, feel incapable of dealing with progress; technology is moving faster than critical thought is. True social criticism comes just once technologies are in motion and setting about reinforcing the current values of the nuclear, monogamous and heterosexual family.

[23] Ibid p. 19
[24] Ibid p. 235

Technology is feared for its alleged unnaturalness, legitimised when it perpetuates naturalised social organisations, and rejected when it is not on a path which promotes traditional values. *"Artificial reproduction is not dehumanising in itself. At the very least, the option of choice should enable a sincere re-examination of old maternal values"*[25] (own translation). All progress which could potentially benefit a given society by eliminating primary hierarchies was considered unnatural. The problem does not lay in the appropriateness of an artificial placenta which liberates woman from reproductive work, but in the fact that in order to make such an invention reality, it is necessary to invent an excuse for its purpose; an excuse which would change biological assumptions over the nature of woman. It is only on the grounds of safer and more effective maternity that the powers that be permit such developments, and these reasons remain far from the ideal of a reproduction shared equally between the sexes for which the author campaigns.

4. The 1980s: the attack upon new reproductive technologies.

Science, it would seem, is not sexless;
she is a man, and a father, and infected too. Virginia Woolf 1938

From the 1980s onwards, the majority of feminist investigation began to focus its attention on the capitalist and patriarchal relationships from which modern techno-science was emerging. The problem, as Firestone had already indicated, was that developed technologies required a series of meanings in come to fruition; Firestone ignored, however, that the construction of these meanings lay solely in the hands of a functionalist and determinist form of science, and that technology was thus neither neutral nor made appropriate use of women. This chapter is based upon feminist criticism of scientific phallocentrism. With the appearance of a new approach, "*science is social relationship"*[26] *(*own translation), science and ideology would be mutually constituent. Through the search for strategies to integrate or position women as protagonists of science, the question is becoming one of the questioning of the inherent androcentrism of science. Sandra Harding deems the consideration of the role of science

[25] Ibid p. 250
[26] WAJCMAN, J. *El tecnofeminismo*. Madrid: Cátedra. 2006. p. 30

within feminism to be an important step in considering the role of the feminine question in science.

Technologies were once seen as a threat to humanity which would bring domination and exploitation of maternity. A host of increasingly more sophisticated techniques had been institutionalised in hospitals and laboratories[27]. As Duelli Klein suggests, if anything had changed, as New Reproductive Technologies began to be referred to as NRTs, it was the escalation of exploitation and bodily invasion. The position taken by feminism in the 1980s called for a stance of rejection and would heavily resist the disproportionate and oppressive development of NRTs. The pill, for example, previously welcomed as a triumph, was now seen as the price paid for the belief that women had been sexually liberated[28]. Women, in ingesting this new form of techno-power, had allowed the alteration of a feature of life to which men ordinarily had had no natural access.

I have previously made reference to the excesses of technological ambition. NRTs exceeded anything imaginable. It was possible, for example, to extract eggs from a foetus not yet born (Rowland 1984), to freeze embryos to be sent into outer space (Corea 1985), or to experimentally combine the genetic material of creatures of different species. But only scientists could have devised a use for such practices. The question which a large number of feminists were asking themselves was: how far can this distortion of human life take us?

Faced with this scenario, a bleak future was imagined in which routine technological control would ultimately substitute "natural" forms of human reproduction. Under the glare of science, the mother would become a threat to society, and would be compelled, accordingly, to submit to a host of interventions during her pregnancy in order to eliminate her understanding and reproductive capacity. The warning of this approach fears that when the artificial womb is ready, women as procreators will be completely redundant.

Some proposals went down the route of attempting to create a "feminine science". Techniques which women could carry out themselves, like menstrual extraction, self-

[27] The first in vitro fertilisation took place in 1978, the first test tube baby being born in England
[28] DUELLI KLEIN, R. "What´s "New" about the "New" Reproductive Technologies?" In *Man-Made Women. How Reproductive Technologies Affect Women*. London: Hutchinson and Co. 1985. P. 67

insemination and surrogacy, were reclaimed. But any attempt to control technology guided by the desire of women was discredited and morally condemned. As Duelli says: "*When women refuse to obey, when we take the control in our hands, (...), such action is often called dangerous, immoral, and irresponsible."*[29]

What, in that case, is the reproductive process which was deemed as "natural" and as belonging to women? Attitudes like these dismiss the idea of femininity and masculinity as a social product. Gender differences raise the issue of what is considered feminine, emphasising certain values linked to pacifism, humanism, care or empathy. Thus, such differences would not only be impossible to eradicate, but it would additionally be unnecessary to do so. Reproductive capacity is the exclusive property of the sphere of femininity which is being reclaimed.

The great majority of the feminist voices which have spoken in this chapter (Corea 1985, Duelli-Klein 1985 or Rowland 1984) were part of the group FINRRAGE, the *Feminist International Network of Resistance to Reproductive And Genetic Engineering*, which demanded that maternal experience be a form of resistance against the destructive values of men. They publicly denounced the silencing of women in scientific research and practice and targeted multinational corporations and governments responsible for medical negligence and unscrupulous profits. FINRRAGE was without a doubt a great counterforce in taking the debates over NRTs out of the monopoly of science and into the realms of academia and international organisations. Although their arguments more closely resemble apocalyptic conspirator than feminist solutions, I would like to conclude that many of these women successfully foreshadowed what is happening in genetic investigation today.

4.1 Gena Corea's 'The Mother Machine': the war against androcentrism.

In his well-known work "The Mother Machine: Reproductive Technologies from Artificial Insemination to Artificial Wombs", Gena Corea strongly evokes the involuntary picture of techno-war in which women are caught. In arguing that maternal identity is today understand as an industrial machine at the service of systems of

[29] DUELLI, R. 1985 p. 69.

production, the work represents a landmark in the study of NRTs. The growing exploitation of animals as breeding machines aids her in extrapolating the prospect of a future of 'mother machines' becoming professional procreators controlled by men and their machines. Further to this, the industry accused of complicity in this process is not any, but an industry linked to arms, drugs and prostitution.

These links lead her to draw a picture of a society controlled by 'pharmacrats' in which women are caught in constant struggle. The existence of technology as a form of attack against women means taking up the fight against the scientific objective of appropriating reproductive capacities. Addressing hysterectomies as a form of preventative treatment for cancer of the uterus, the author asserts: *"such a practice cannot be logically defended as a health measure, suggesting it is exactly what one commentator has described as a "war against the womb"*[30]

Just as the "war against the womb" served as a metaphor for the feminist strategy, so the "reproductive brothel" offers a striking image evoking the sexual exploitation to which women have been submitted. "*Motherhood is becoming a new branch of female prostitution."*[31] Bodies are sold for reproductive purposes, just as they have been sold for sexual purposes.

The metaphors used in her work will be powerful tools in identifying the consequences of NRTs which feminism must avoid. But at the same time, meanwhile, her work reflects the position of women in social categories of immobility and victimisation which may hinder their empowerment in the face of new "attacks".

4.2 Counterpoint in the 1980s, or minority feminisms.

The writings of Michelle Stanworth were published in order to counteract the excessive pessimism with which NRTs were being interpreted. In her opinion these schools of thought seek "*to protect women from the dangers of new technologies, it gives too much away"*[32].

[30] GENA, C. *The Mother Machine. Reproductive Technologies from Artificial Insemination to Artificial Wombs.* London: TheWomen´sPress. 1981 p. 308.
[31] Ibid. p. 275
[32] STANWORTH, M. *Reproductive Technologies: Gender, Motherhood, and Medicine.* Cambridge, UK: PolityPress. 1987 p. 16

Given that technological development was inevitable and that there existed a real demand for technological provision in pregnancies, these cannot be reduced to a simple case of brainwashing of women (Duelli 1995). The motivations behind this demand must be more complex. Nor does her approach seek to celebrate this development, but seeks rather to identify areas in which NRTs may be re-interpreted more positively. In this way, she states:

> *"Whether or not women are eliminated, or merely reduced to the level of "reproductive prostitutes", the object and the effect of the emergent technologies is to deconstruct motherhood and to destroy the claim to reproduction that is the foundation of women´s identity"*[33]

Or rather: within the great contradictions which NRTs inhabit, they may represent a threat to old patriarchal structures like the nuclear family or monogamous heterosexuality. Attempts to regulate new technologies encounter serious difficulties in upholding such models. New technologies drew attention to the social conformance of the motivations of women to be a mother, but ultimately, *"shaped is not the same as determined"*[34]. Thus, one of the keys to interpreting NRTs is, perhaps, their different implications in different women: *"our bodies do not impose upon us a common experience of reproduction"*[35]. The universal victimisation of women in this way does not allow for distinguishing the true issues which are at stake in the debate over NRTs – issues which are seemingly more closely linked to controversies over sexuality and kinship than to the re-appropriation of the reproductive capacities of women.

> "P*ractices such as artificial insemination by donor, or egg donation or (some forms of) surrogacy, pose a highly visible challenge to the notion that genetic parenthood guarantees familial relationship*"[36]

By iidentifying the contradictions of NRTs, they may be understood as a challenge to the reproductive axioms determined by the same science which had previously deemed biology to be an unchangeable destiny and the same science that was now changing with every technological intervention.

[33] Ibid, p. 16.
[34] Ibid, p.17.
[35] Ibid, p. 19.
[36] Ibid, p. 21

5. The Technofeminism of the 1990s: fragmentation and potential imaginaries.

What is "normal" is very often stabilized by what is "natural"
Charis Cussin

"The coherence of the standard (modern biological) model of the facts of live is a good example of the naturalized narrative that is troubled by new technology"
Sara Franklin

Over the course of the 1990s, there arose a critical attitude towards the positions of the 1980s which, through technological determinism, had totally eliminated the capacity of women for agency and hindered any proposal for congruent empowerment.

> *"The vision of technology as an external, autonomous force which exercised an influence upon society limited the prospects for democratic compromise with nature by presenting a restricted range of options; the simple acceptation lacking of criticism of technological change, the defensive adaptation of oneself or the absolute rejection of this."*[37]

Women had been defined as passive objects of science, and now, in order to continue to make progress on the theorisation of feminism, there was a need for a new subject capable of defying technological threats. In this chapter we will see the efforts of a number of authors to shift the subject under study toward the position of actants of techno-science. Wajcman explains the necessity for this movement in the following way:

> *"Technologies have crossed the point of no return; an irreversible process; our irrevocable destiny, perhaps. Nevertheless, great changes (...) require that both processes of innovation and their impact upon culture must be radically reconsidered."*[38] (own translation)

In the 1990s, a field of research named techno-feminism emerged, warmly welcomed by those generations of women who had grown up around technological terminology. One of the areas of this new approach which I find most interesting is the

[37] STANWORTH, M. *Reproductive Technologies: Gender, Motherhood, and Medicine.* Cambridge, UK: PolityPress. 1987 p. 55
[38] WAJCMAN, J. *El tecnofeminismo*. Madrid: Cátedra. 2006.

space from within which many women were debating these new positions. Whilst the so-called Hard Sciences had always been an inaccessible space for feminism, from the 1990s onward gender theories and politics began to be heard in various disciplines such as biology, medicine or information technology. The lines between disciplines were cautiously been blurred.[39].

The shift took many directions and the subject under study also suffered great changes. Feminism began to focus its attention upon the specific experiences of women and the different agents of the technological process such as types of apparatus, clinics, eggs, sperm, and an array of different protagonists which until now had been understood as given and necessary instruments in the process.

> "*Normalization is taken to include the staff member by which "new data" (new patients, new scientific knowledge, new staff members, new instruments, new administrative constraints, and so on) are incorporated into preexisting procedures and already recognized objects of the clinic"*[40].

That which we consider pre-existing changes with time, however. This new turning point therefore demands that hereafter it is not only nature but also technology that shapes the categories with which feminism works. Allow me to explain: reproduction cannot be a phenomenon understood purely as a natural-biological process, nor purely as a culturally constructed process, but rather, reproduction must be a "technologically naturalised process" (Balsamo 1996). Accordingly, science and its developments in bio-technology are a good example of the type of naturalised narrative which it will be necessary to problematise. (Martin 1991, Balsamo 1996, Franklin 1997).

> *"Reproductive technologies provide the means for exercising power relations on the flesh of the female body. In this way, the material application of new reproductive technologies are implicated in, and in part productive on, a new discourse on maternal identity, paternal*

[39] For more detail on the debate over the relationship of feminism with biology see DAVIS, N. *New Materialism and Feminism´s Anti-Biologism. A response to Sara Ahmed.* European Juornal of Women's Studies. Vol 16. 2006 Pp. 67-80.

[40] CUSSINS, Ch. "Producing Reproduction: Techniques of normalization and Naturalization in Infertility Clinics" In FRANKLIN, S. and RAGONÉ, H. (Eds.) *Kinship, Power and Technological Innovation* University of Pensilvania Press. 1998. P. 67

responsibilities, and the authority of science. At the heart of this discursive production are the cultural narratives about motherhood, the family, paternal uncertainty, the role of techno-science, and the medicalized citizen"[41].

Techniques and discourses around NRTs are not simply the product of new discourses of scientific-medical authorities (as claimed by Corea), nor purely the product of changes in gender ideology (as defended by Firestone), but are, rather, a constituent part of them. Thus, the meanings of human nature are revised in every medical practice. Gender is seemingly no longer something pre-determined; rather, every technology possesses its own process of gender formation. For example, the question of who may be considered infertile or who can be fertilized is created by the discourses over sex, race, class or politics which define the representation of a subject.

The entry point is that every artefact is formed by the relationships, meanings and identities of gender. Existing hierarchies of sexual difference affect the design, dissemination and use of technologies in different ways. "*Emphasising the heterogeneity and contingency of technological change aids in the localization of its possibilities*"[42] (own translation). By stressing the contingency of the changes, one hopes to highlight the existing subjectivity and agency of the technosphere.

In order to demonstrate the manipulability and malleability of technological systems, feminists must show that gender identity is socially constructed, an assertion which has previously been oft repeated – but what is really meant by this common phrase of feminism? What genre of architecture does identity construct of both people and technologies? The refusal to qualify technologies as a product of rational technical imperatives focuses attention upon the factors which lead a new technology to its success or failure. Any given technical advance is affected by the social and political factors which determine it, or rather: a given technology does not succeed because it is intrinsically more efficient than another, but because certain social systems allow and encourage this success in particular circumstances. "*Machines work because they have*

[41] BALSAMO, A. *Technologies of the Gendered Body: Reading Women Cyborg.* Durham DC: DukeUniversity. 1996 p. 82
[42] WAJCMAN, J. 2006 P. 16-17.

been accepted by social groups; the fact that a machine works or not must be explained rather than taken for granted"[43] (own translation).

Furthermore, once a technology has been designed, its development does not end in this phase, but rather, its functions and social consequences continually adjust according to its application and use. In this way, users may significantly alter the results and intentions of that emerging from the laboratories.[44] In this way, technologies are a continual process of negotiation whereby both women and techniques possess their own agency.

With regards to the question of whether biology is being manipulated by technology, it appears to be time to accept that such a fate is a question of unpredictable becoming. The opportunity offered by biotechnology to re-design one's own body opens the way for new chances for self-fulfilment and for the emancipation of feminist politics. The challenge now is to subversively profit from the opportunities outlined by Firestone or Stanworth for counter-response to classic social models of heteronormative families.

However, criticism of bio-technological power that defines the human diversity in favour of benefits not shared by all humanity remains. The decade of the 90´s also gives rise to a serie of resistance technologies of ecological sustainability to restore a less agresive nature. In the following section we will see two opposing positions, but not the contrary, through the metaphor of woman as a goodness or the metaphor of women as a Cyborg.

5.1. Ecofeminism, or the Godness as a metaphor.

Despite the tendency of many to associate ecofeminism with pacifist, conciliatory approaches, its approach is on principle thoroughly irreconcilable with any discourse connected with practices delegitimising or entailing a loss of sovereignty with regard to human reproduction. In ecofeminism, maternity is the essence of female identity. Just as multiple ecological farming movements have referred to 'food

[43] Ibid. p. 61.
[44] For an example of the use of testosterone as a political drug see: PRECIADO, B. "Testo Yonqui" Espasa Calpe 2008.

sovereignty' in demanding the right to manage their own food supply, ecofeminism demands, in the same sense, a powerful reproductive sovereignty as the right to govern their own reproductive capacities.

One of the great achievements of these voices reveals that the dark roots of reproductive technologies are anchored in the Western scientific paradigm. Not only does responsibility for the continued exploitation of women lies not only in the patriarchal, capitalist system, but all Western ethnocentric philosophy must be disarticulated. María Mies writes in her text that:

> *"The entire developmental process behind mechanical gadgets and modern science would, however, not have been possible without the application of the very principles of violent subordination and exploitation of the colonies and their peoples. The peoples of America, Asia and Africa were treated as "savages", just as women and nature were in Europe"*[45] (own translation).

The subjugation of what is natural in order to benefit the development of scientific knowledge imposes a form of social control which is motivated not only by sexist but also by racist and classist interests. The principles of the technologies which they aim to attack are based upon domination and exploitation of nature and in the exploitation and submission of women and other cultures. They understand the means of technical progress to be the violent destruction of the natural links between living organisms and the dissection and analysis of these organisms into their most elemental components, with the aim of re-assembling them in the form of machines. Western culture has ceased to consider the Earth as a living organism to be cared for and begun instead to treat nature as a machine to be exploited in the name of progress.

In this chapter we will analyse how ecofeminists, mythologising the past and creating a "clear" concept of nature, celebrate the biology of women as a source of feminine power capable of taking on masculine technology. Not any biology, however, nor the biology constructed by modern science, but a biology already possessed by women with no modern scientific knowledge. Population control was in no way discovered by new technologies; rather, these technologies have robbed women of a

[45] MIES, M. and SHIVA, V. *La Praxis del Ecofeminismo. Biotecnología, Consumo, Reproducción*. Icara Editorial. 1998 p. 31

knowledge of which they were previously mistress.[46] Women, like "the others in science", have been demoted to the role of a mere object or exploitable resource for human beings, or rather: for men. The metaphor of woman at one with nature will be the material with which ecofeminists shape the subject-agent of their rights as women. In this sense, their proposal is a much clearer one than that of radical feminists. Their proposal originated not from the obsolete class struggle which motivated the later approaches of radical feminism in the 1980s but from the urgent questions posed by ecology (natural birth, return to the field, food awareness, etc.) With the proliferation of metaphors such as "one earth family", they aim to construct a feminist technoscience supported by the cement of the vitality and fertility of the female sex and of nature: intuition, responsibility and the ethics of care are to lay the foundations of a relationship not based upon the oppression between nature and humanity[47]. They oppose technology in favour of returning to a mythical natural state; their attitude in relation to the possibility of redesigning technologies which promote gender equality is one of absolute negativity. They consider technology to be something society has erroneously accepted as sacred, based upon the idea of an imperfect nature; nevertheless, at the same time they too accept nature as sacred and women as goddness replicating once more the dual ontology of the West.

5.2. Haraway's Cyborg: toward new feminist imaginaries.

Donna Haraway's well-known Cyborg has become an icon of the expansion of boundaries and their ability to be transgressed. Between the biological and the cultural; the human and the machine; there emerges a new representation with which to reflect upon the possibilities of modern technologies. In this section I will analyse the Cyborg as an unelected political fiction embodying the destruction of the dichotomies in which it was created. The cyber-organic bound is now a part of our everyday lives, and the Cyborg represents at the same time a view as metaphorical as it is realistic of the promises and threats of techno-science.

[46] Ibid. p. 187.
[47] Ibid. p. 38.

Her efforts to criticise any position which rejects technologies in favour of a return to a mythical state of femininity have been well argued. Pure discourses over identity which prevent the viewing of hybridisation as a positive process are, for Haraway, an act of domination which too closely resembles the colonial, racial and imperialistic policies of recent centuries.

Despite the misinterpretation made by many of Haraway's work as promoting corporeal hybridisation as the "accessory" of technological prostheses, in reality the cyborg representation proposed by this author has little to do with this, nor with the animation of the machine (in the style of a revolution of machines against humanity like that depicted in the *Terminator* films), nor with the mechanisation of human beings (in the style of *Brave New World* in which bodies are highly controlled by genetic engineering). It has to do, rather, with the ways in which science has dealt with technology in order that it makes *sense* in our lives, and with how cyborg feminism may be capable of re-interpreting this relationship in terms of affinities and friendships.

The bodies proposed by Haraway are not born, and, further to the assertions of Beauvoir, or are not they "made" in a personal sense; they are, rather, consciously fabricated by a patriarchal techno-scientific system[48]. The Cyborg body belongs to a post-oedipal world in which reproduction is not part of sexuality, nor even of the kingdom of genetics and identical clones. Reproduction in the Cyborg world must instead be seen as a process of viral infection in which each organism feeds upon other organisms in order to reproduce; a process in which each of us is implicated. Nor is the issue one of a transcendental promise which we are compelled to fulfil; rather, it is a reality which we inhabit. From McDonald's workers, components of a capitalist, technological system, to the plastic surgeons so in fashion in the West; all are cyborg realities. This approach permits us to less dichotomously understand the ontological condition of new agents such as frozen embryos, surrogate mothers, or genetic clones. Each one of us is implicated in these processes of change, processes generating "new individuals and new human forms", and furthermore, each one of us is complicit in them. The cyborg's loss of innocence obliges us to take our place in the reproductive scientific system and in the construction of its boundaries. In the context of NRTs, each of us – scientists, women, patients, etc. – must review her contribution by participating

[48] HARAWAY, D. 1995 p. 357.

in the aforementioned cycle and finding alternatives for sustainable survival within it. We must escape from the preconceptions of victim and executioner encouraged by classic studies of NRTs in order to participate in new constructions of that which we wish to consider normal or abnormal, or rather, construct the nature of Nature and generate political discussion of biology and its technical advances. A nature which, as Haraway states, must be open to intervention:

> *"We are far from understanding with any accuracy what our biology could be, though we are beginning to be aware that its promise is rooted in our modern lives; that we have the science that we historically create"*[49] (own translation).

That is to say that, similarly to Butler's performativity, events are not explained by science; rather, science produces the events that it wishes to explain.

Her analysis of the history of science explains the manner in which we have moved from a science based upon sexual reproductive organisms to a science based upon reproductive genetic assemblies. Thus, in the last fifty years, all of the certainties which biology possessed toward reproduction have been rewritten, giving rise to a new production of nature. The production in question has, meanwhile, been written by sociobiology, a science defined by Haraway as scientific humanism[50]. The Cyborg theory suggests that feminists are the ones partially rewriting "other" new invented histories more in keeping with our needs. What is degree of freedom are there in a new feminist scientific production, however?

To conclude, and in answer to this question, I will analyse what Haraway suggests to be a new form of perception which will revolutionise feminist perspectives in science and discourage what she terms the "God trick", or rather: relativism and universalism as two sides of the same coin which refuse to favour any one scientific perspective. *Situated Knowledges*, as a form of writing science, will be interpreted as feminist objectivity, or rather: the limited localisation of that which we are observing. It is known to us that the ability to name is the ability to objectivise; to totalise. Meanwhile, so long as we are conscious of the space within which we are performing the action of naming, all processes of objectification of reality may be legitimate.

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[49] Ibid. p. 74
[50] Ibid. p. 119.

6. Unfinished Reflections: the 21st century, or of that which we may consider human in a post-human world.

Without a doubt, this work has sought to highlight the manner in which bioscientific and biotechnological development have a major impact on how we perceive the human subject; a subject experiencing displacement at the hands of new scientific mandates which are sometimes menacing in their pure objectification (in the style of the critical thought of the 1980s), and at other times in their total disappearance (at the end of these reflections we shall examine some of the implications of the corporeal transcendence offered by bio-techno-medical discourses).

Before anything else, I would like to justify my use of the cartography as a form of grappling with a reality which to us appears alien: the reality of human nature and its reproduction. The drawing of cartographies has been a way of setting the machine of knowledge in motion. This enables us to gain a favourable perspective in order to observe the different discourses and rationales toward NRTs within the diachronic space; the relations between them, their evolution, as well as the political framework within which they develop and their historical context, all in order to acquire a broad understanding of the phenomenon here under study.

It is necessary, however, to clarify that the mapping of any phenomenon (NRTs in our case) does not mean the abstraction of a reality from the domain of the material to that of the imaginary or of ideas: I am not aiming to capture a reality in order to theoretically conclude it. It is for this reason that this chapter is entitled "incomplete reflections", thus leaving my thoughts open to future reformulation. Rather, a cartography is a way to simulate that which we consider to be real: it is something unfinished, imperfect, as this work seeks to convey, which, like our realities, is in a process of constant change.

The simulation works on different levels throughout this work. On the one hand, I portray feminist theories and approaches as some of the most appropriated simulators of this era. To simulate is to generate models of something that I understand to have no

origin and no purely real content. Haraway once wrote that the history of women was invented by women as a necessary and powerful political fiction in support of the struggles of women (Haraway 1995). In the same way, the feminist approaches that I have assembled in this work have *invented a reality* which is not inherited; rather, what is really at stake is the opportunity to construct explanations before reality becomes naturalised or normalised. Feminism presents itself in this same way: as a powerful counterforce against the normalising powers, capable of creating models based on the diversity of corporeal experience and broadening the spectrum of the representation of positions still beyond the boundaries of that considered human. We are observing a mutation in the biopolitical mechanisms of production and the control of the body, sex, race and sexuality. This large-scale transformation, touching the very nature of the processes of production of life under capitalism, will also ultimately modify the topography of oppression and the conditions under which fight and resistance are possible.

For this reason, I consider it crucial to revise previous structures of resistance offered to us by feminism. The next step will be to create new forms of combat which transcend the dialectic paradigm of victimisation, but also the logics of identity, representation and visibility which have, however, already largely been reabsorbed by the medical-scientific apparatus of control and hyper-surveillance. Part of the political challenge, here, will be the issue of how the body (its human status or its condition of citizenship) may access the productive technologies of subjectivity in order to redefine the democratic horizon. For this, it will be necessary to leave the comfort zone of any brand of feminism which targets becoming part of the mainstream. We must leave behind feminism as a theory specialising in the oppression of women; it will be necessary instead to move towards those brands of feminism (queer theory, transfeminism, posthuman feminisms) which are pioneering the transversal analysis of oppression, both corporeal and racial, gender-based, sexual, or economic. In the face of the vital and immediate interrelation of the totality of the planet, there is an increasing demand for feminist theories regarding vast connections and mobile thresholds, linking science to politics, politics to desires, and desires to the reproduction of life. The task will be to establish networks, propose strategies for cultural translation, and to share processes of collective experimentation, meaning, to use the power of shared experience to become conscious that we are participating each day in revolutions which are still

very alive. Just like the highly self-critical and pacifist revolutions, feminism and other sexual movements are changing in the face of the collapse of the great ideologies and the expansion of the model of political terror, becoming authentic laboratories of the social and political revolutions of the future; real anti-bio-political forces capable of inventing forms of resistance to the violence of the norm and of redefining the survival conditions of the multiplicity.

On the other hand, I have presented medicine as one of the areas most experienced in the act of simulation. The reproductive phenomena explained by biology are pure performances, that is to say: science does not explain the real facts of nature, but rather produces the very facts that it aims to explain, forcing them to correspond with what is real. A very clear example of this is cloning. Is cloning a new reproductive truth providing new ways of reproducing life? Or is it, rather, a lie with which bio-scientific powers may trick us into believing; a process which substitutes true reproductive realities? Neither of these two propositions is the correct one if we wish to non-dually tackle the phenomenon of cloning. Cloning is neither a form of pretence nor a way of concealing reality, for both of these principles – pretending or concealing – would only mask reality; rather, the latter will remain intact, belonging to a rational and imperative category which it will be impossible to modify. Nevertheless, if we consider the clone to be a simulation (not a lie, because reproduction truly occurs, but nor the truth, as it is the aim is not to establish the clone as a new reproductive model), then we may consider that this simulation truly calls into question what is true and what is false; what is real and what is constructed from the reproductive realities in which we live. Culture clones us before biology is ever able to do so: education systems, universities, the workplace, mass media, and technological fashions; all are charged with creating social clones with one single mode of thought. It is this aspect which ought to lead us to consider cloning as a very serious matter.

In attempting to tackle the phenomenon of NRTs, and especially those NRTs whose applications, even today, are not normalised like those of the latter, we must face the greatest ethical dilemmas with regards to their possible uses and corruption by sources of power. Science only offers us two possibilities: accept them as moral (in the name of the eradication of diseases which damage humanity) or fight them in the name of morality (as in the positions of rejection which see their moral principles as under

attack). Both stances are inherently identical; both are also true at the same time; both simultaneously possess their own degree of manipulation (let us remember that a stance of rejection is also shared by the Catholic church which radically opposes NRTs based on a strong moral code they have constructed for the human being). The issue is that today, we find ourselves faced with the logic of simulation, in which the models which we create precede the facts, giving rise to all possible interpretations, even those which are the most contradictory. We must therefore focus on the absence of truth or of reality if we wish to politically challenge technological change.

Meanwhile, in order to escape the schizophrenia of the 21st century, the power – conscious of the absence of reality and its malleability – is seeking to impregnate everything with references, signs; we know that it is necessary to safeguard what is real if we wish to continue to survive as *humanity*. To this end, there has arisen today a concept of the human body at the smallest level into which it is possible to divide it (or reproduce it), that is to say, on a nuclear, molecular and genetic level. Genetic material in laboratories is today the most powerful sign or reference point defining human life. Because of this, we invest millions of dollars in the Human Genome Project, a museum of humanity which charges itself with constructing a reminder of what we are in the memory of humanity. The human subject has become a subject and object of science at the same time. In addition, however, science always seeks to distance itself from its object; only in this way may it really get to know without "barriers". The body is defined by its molecular processes, laying aside its desires, its experiences and its relationships with other bodies, all of which are the conditions which truly constitute its existence. The Human Genome, which collates a sample of all of the genetic codes contained in the human body, is not a matter of an "incomplete or incorrect" representation of reality, but rather obscures that it is this very reality of humanity which is defined by science and to which a large part of the population is succumbing. The museum is a dead space, a space which now contains only corpses which are there to tell us what life once was. In the same way, we may state that the Human Genome tells us that we are now dead, and that science will now be responsible for telling us what we were. In that case, however, how can we create what we are, or rather: if the question is not one of "being" – what we are becoming? What will be considered human in this post-human world? Should we strive to stay human or may we break through the boundaries in order to reflect upon a post-human subject? At the core of the discussion

over what is naturally human, we may place the deconstruction of the concept of woman by feminism, as well as all the definitions therein entailed such as maternity, lineage, or fertility. The aim is to avoid its excluding and normative effects. Without straying into an irrational optimism around the "positive" relation, *per se*, of technologies, or into a degradingly negative apocalyptic pessimism toward the same thing, it remains possible to reflect upon the possibility that the new feminist subject will enable a corporeal sensibility outside of the dualism and stereotypes currently in force.

Technologies are often considered by the bio-politics of science as an opportunity to transcend bodies, a means of flight promoted as an environment free of corporeal matter, a place of escape for the incarnation of gender or other differences. Feminism appears to be prepared to fight the migration from a unitary and complete subject towards a permanently incomplete and multiple subjects, but it will never accept complicity in the annulment of the subject currently being sought, nor in its supposed disappearance. The post-human subject of feminism is not a Messiah we have been awaiting; it is not a future matter; rather, it is that which we become in an experience of immanence. New reproductive technologies and virtual spaces should be criticised for having created the false promise of transcendentally surmounting corporeal boundaries. As if this were obstructive, as if the state of feeling uncomfortable with our bodies were a human condition, and additionally unnecessary and, beyond that, a condition particularly suffered by women, science appears to be attempting to convince us to be capable of overcoming bodily limits (mortality) and even making them disappear. This conceptual denial of the body is achieved through both physical and mental corporeal repression. In scientific discourse, the body is synonymous with dirtiness, disease and savageness. Its repression is therefore being naturalised, this time at the hands of technology rather than religion. Medical intervention is deemed necessary to avoid suffering but feminist intervention is deemed in order to avoid the possibility of no-death.

In order to propose a radical theory of immanence, we must first discuss a difficult issue: that of boundaries. It is important to consider the difference between pushing the limits of a great dividing line in order to include the rights of the marginalised Other, and targeting its complete elimination. Some proposals have confused the attempt to

move these boundaries with their dissolution. I would go as far as to say that the tempting proposal of a post-generic world has been fiercely over-dimensionalised by many of its proponents, including feminism.

Haraway's Cyborg, as a post-generic fiction, is, similarly, a metaphorical materiality, but how far are the metaphors of NRTs able to take us? Is the cyborg the last great myth which will liberate us from the great dividing line? Metaphors assist us in understanding the decorporealising force of the discourses of our world, but they are not useful in searching for another possible world. Like Braidotti, I believe that sex or the body will never be eliminated; further to this, feminist politics must continue to emphasise sexual difference in the human body. We must claim ourselves as sexual beings, differentiated and therefore mortal, in order to avoid those forms of life which remain undifferentiated; pure reproduced copies of an immortal, infinite form of life; that which the bio-politics of genetic science is wrongly offering to us. Medicine and technology promise to liberate us from sex and death. The first phase of sexual liberation involved dissociation from the sexual activity of procreation through the pill and other methods of contraception. The second phase, in which we currently find ourselves, is dissociation from reproduction in terms of sex. First sexually liberated; now liberated from sex. Sex has become a superfluous function of little use to us. Accordingly, the so-called sexual revolution is nothing more than the end of sexuality. We must continue to locate the feminine sex in order to analyse the development of new reproductive technologies, but the feminine sex as I have aimed to portray is partial, incomplete, relational, and constantly becoming something new. The body can only be understood as a process, a movement, a change. For this reason I emphasise – and in the whole of this work, this is perhaps the point on which I hold the most hope – that sexual difference gives itself to us as a weapon in the prevention of the disembodied force of hegemonic discourses. In this way, sexual asymmetry and difference may be understood as a form of empowerment, useful in the politics of change which are dictating to us the relationship of our bodies with technology.

There are many ways in which our body is made more of something foreign than of something native. Today, no organ or body part escapes social control. Between my body and I, any number of masters fight for control. The easiest and most necessary thing to do is perhaps to rise up against familial and religious authority wherever they

attempt to domesticate and imprison our freedom of movement with the aim of rendering our bodies obedient, pure, and agreeable. The authority which appears most influential today, however – the medical world – is relentlessly dictating the rules for reproduction of the human life in a much broader sense, both biological and cultural. The issue once posed by Foucault is still relevant: "*It remains to be seen which body society currently requires*."[51] And I maintain in this work that it is precisely this task with which feminism and gender theories have charged themselves. If, in past decades, the need arose to take ownership of our own bodies, today we now know that we must nevertheless treat it as an object of property. Unfortunately, this is the common doctrine of the sciences and of capitalism, these viewing the body as an instrument to be exploited and destroyed; to be manipulated or experimented upon. It is not only bio-scientific powers, however, but all of us, who are coming to degrade our own bodies are a mere means of work, pleasure or seduction; as our primary tool in the configuration of a deeper self, something which is both an object amongst objects and a reality exterior to one's own self. This is how we approach the possession of a body. Let us assert once at all: I have no body, my body is not my own, nor that of anybody else, but I am my body or rather I become my body. The state of being embodied is today my most radical way of being me; the ultimate consciousness of myself and the perception of the other. That is why my body cannot be treated nor by myself nor by anybody else as merely one more object in the world. My relationship with my body is so close that I identify with it.

[51] FOUCAULT, M. "Saber-cuerpo" In *Microfísica del Poder*. Madrid: Planeta Agostini 1994 p, 108.

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