Chapter 1
Introduction

The boy asked his mother,
'Where did I come from?
Did you pick me up from anywhere'?
Mother replied laughing and crying,
Hugging the boy to herself
'You were the desire in my heart.'
Rabindranath Tagore

From conception taking place in test-tubes, to nuclear transfers in petri-dishes, to embryos that have been cryogenetically stored in liquid nitrogen – the stories of conception and pregnancy are changing. The new genetics has spawned diverse manifestations for the society, as certainly these new technologies open up a plethora of options of becoming parents. What draws our attention, as social scientists, is the potential of New Reproductive and Genetic Technologies to call into question our understanding of family and kinship. These New Reproductive and Genetic Technologies (NRGTs) force us to reconsider – how we understand ourselves, our bodies; and how we relate to each other and those around us. It makes us pause and introspect – what does it mean to be a parent when as many as five people can contribute to the birth of a child? What does it mean for a woman to carry to term a child, which is the ‘product’ of someone else’s egg, fertilized, perhaps by a stranger’s sperm, outside her body? What does it mean when a single man can father a child without the active involvement of his partner/wife? What does it mean when it is possible for a woman to carry to term, a baby made from her daughter’s egg and her daughter’s husband’s sperm? What does it mean to be someone’s relative or kin in this context?

In our search for answers to these questions we will not involve ourselves on a moral tour as to whether the technologies are good or bad or are made to use for good and bad
purposes; neither shall we fall into the trap of rigid binary opposition of celebration and dismissal, of technophilia and technophobia. As,

*It is a mistake to think that we can somehow factor out the hype, the media or the work of the imagination to exaggerate either the promises or the risks of new technology. This is not going to be possible, now or in the future, because it is precisely the importance of imagining a future yet-to-be, which fundamentally defines the whole issue of new genetics and society (Franklin 2001a: 10).*

But we would thrust on ourselves the task of asking “how things mean, how knowledge is constructed, and how understandings are produced” rather than what “bioethics often asks ... is something ... right or wrong” (Franklin 2001a: 2). However, this is not a unique endeavour without a theoretical heritage to it. Social scientists have made considerable attempts to understand the NRGTs in the wider social and cultural frameworks. However, such attention has been concentrated in the Western context where such technologies have been introduced, proliferated and standardized. But, it will be wrong to assume that the impact of these technologies is limited only to the Western countries as, in this era of globalization and diffusion of technologies, medical expertise and people seeking medical attention are not restricted to a particular geographical locale. As much as this is true, it is also important from a social science perspective to look at the extent of the prevalence of these technologies in a particular locale in order to gauge their potential to make and unmake relationships. If these technologies are as alien and new-fangled as they are often portrayed in media and public understanding, then it will be rather untimely to appraise their impact and implication on kinship relation.

Statistics of usage of these techniques is not available at a national or regional level at present due to the absence of a functioning National Registry in India and also due to the secrecy surrounding infertility. But, if we trace the history of diffusion of IVF in India, the growing number of infertility clinics in our own localities and the increased coverage in the media in the last couple of years since late 1990s, we would surely get an indicator of its growing usage as a standard practice in *bypassing* infertility. Moreover, though

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1 Discussing these issues with my friends and colleagues have always brought in questions regarding its prevalence in India. Questions have been raised as to whether this is really happening in our society or is just science fiction.
these technologies are still referred to as *new*, it is almost two decades that these techniques are around. It is, however, only in the recent past that there has been a sudden diffusion of these technologies like never before and also a profound visibility in the media, if we take media as a platform which upholds *newsworthy* information.

Even if to the outside world these conception stories appear to come up from the pages of science fiction, once one steps inside an infertility clinic one can see a considerable number of men and women waiting for consultation; and appointments of the doctors booked for seven to eight months in advance. In the last two years the number of websites advertising assisted reproductive services has more than quadrupled – this might, at one level, reflect the mainstreaming of cyber technology but it hints at the proliferation of Assisted Reproductive Technologies as well. The number of couples visiting the IVF clinics has gone up by 50% in the last five years. The number of patients visiting the Institute of Reproductive Medicine\(^2\) (IRM), one of the primary infertility institutes in India, has increased by four times in the last five years, from an annual average of 1000 couples in 2001 to the current average of 4000 (Mandal 2006). Here one witnesses women and men from all across the society and even the remotest part of the country seeking treatment hand in hand with the NRIs (Ananda Bazaar Patrika, Kolkata, March 26, 2007) and there is no space for skepticism regarding this ‘might not be happening in our society’.

The task for the present study is to obtain a perspective on the existing situation about ties and obligation (such as family and kinship), identities (such as motherhood, fatherhood) and social processes (conception and pregnancy) (Stacey 1992). We will try to understand how kinship is practiced and identities created and how the notions of gender, and procreation develop in infertility clinics. It will be interesting to see how women, men, couple, physicians, and third party donors take on this errand with the help of innovative medical techniques, improved laboratory standards, and rapidly evolving guidelines. We will try to ask questions such as – What do men and women seeking infertility *treatment* take as the defining criteria for being related to each other? More

\(^2\) It is also the clinic where a considerable portion of the fieldwork for the current study has been conducted.
specifically, what makes a person a relative – gene/blood/gestation/food/nurturance or a collage of all these ingredients? We will be also interested to find out whether this is a field where choice actually exists or is it illusory.

Hence, we will ask: Do the couples/men/women exercise choice and agency in the infertility clinic in order to make and unmake relationships? Does being born from a donor sperm, creates a knowledge base and bestows a specific identity to a person? Or, are the social criteria of nurturance and sharing of food the guiding principles in defining which 'jati' a person belongs to? How commercialization of sperm/egg is perceived when gift giving and sharing are the codes of conduct for practicing kinship relations? How does the new scientific knowledge of the egg, hitherto absent in cultural discourses on conception and pregnancy, get translated and form part of the kinship narrative?

The focus of this specific study will be to decipher how couples, practitioners and donors engage with Assisted Reproductive Technologies (ironically, its acronym is ARTs) in their daily encounters at the infertility clinics, how they practice kinship and add on to the narrative of ARTs potential to make and unmake social relationships and identities. In order to know the implication of technologies on kinship there is no doubt that we need to have a hand on knowledge of these techniques. But it is even more important to know how and when individuals intend to use them and their experience through such usage. In order to achieve such an end we will delve into these technologies, the seekers/providers of such services and, most importantly, the linkage between the two. The present study will focus on:

- Understanding the human agency in negotiating and manipulating family values in the infertility clinics through the recipient couples, medical practitioners and donors;

- Decoding the meaning/s of relationships, identity, and reproduction in a particular socio-cultural context, namely, West Bengal.
Hence the idea is to initiate an enquiry into whether changes in procreative practices have ramifications for the formation of kin relations. However, we do not plan to restrict ourselves to kinship relations alone but would be as much interested to trace the potential of ARTs to call into question other cultural categories of gender and sexuality. We will also try to look into the context i.e., the medical market in which the process of engineering is carried out. This is because, ART is opening up as a possible site where “contradictory signifiers” are merged into a single identity. Phrases like “genetic engineering”, and “designer baby” (Bloomfield and Vurdubakis 1995: 535) give a glimpse of a world where there is a supposed unification of laboratory and human life, of procreation and commodification and the so-called natural and artificial. These technologies aim to produce “miracle babies...yet they are irreducibly mundane...they are intensely technological...yet they also make kinship...they are variously commodified...yet they promise the priceless.” (Thompson 2005: 4-5) It thus juxtaposes otherwise contradictory realms into a single experience and calls into question our understanding of personal identity, intimate relationship and the beginning and the ending of life.

I will embark on this investigation by studying sites of technoscientific practices, which are rich locales of not only unprecedented development and challenging technologies but equally exigent questions of social life itself. In doing so I will first provide a brief description of specific technologies, which will be under sociological scrutiny for the present study. Then I will move on to sketching the theoretical framework which will give us the vision to look at these processes; followed by a nuanced understanding of Bengali kinship where I will locate our understanding of both technology and kinship.

I. Technologies Providing Assistance

Reproduction, as defined by the Oxford English Dictionary is ‘the action or process of forming, or creating or bringing into existence again’. Reproduction as a site of investigation and enquiry is a latecomer in the field of social sciences. This is because reproduction has been conceptualized as a biological process per se, relegated strictly to
private domain and a given base of family and kinship, the latter being the vestiges of the past. This is quite striking as other apparently biological processes of eating, engaging in sexual activity or dying has not been exempted from the attention of social scientists (O'Brien 1981). The credit for making reproduction the core of social theory (Rapp 2001) can be attributed to feminist studies, and medical anthropology followed by feminist science studies. This scholarship has decentered European (or Euro-American) notions not only of the body but also of science and biomedical science in particular. The dramatic rise and expansion of international women's movements, which have been virtually coterminous with this period, led to the questioning of body, reproduction and science as objective facts out there. They were successful in bringing nature under the microscope and to subject it to grueling interrogation. It is through these multiple theoretical strands that the formerly invisible process of reproduction has become more and more visible in public discourse. It is this “highly hybridized theoretical genealogy” (Rapp 2001:468) that I am indebted to, for it made me conscious of looking at Assisted

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3 This section is partly based on my M.Phil dissertation titled, *Assisted Reproductive Technologies and Kinship: Emerging Conceptual Issues* in which I have sketched a detailed history of ‘Reproduction Coming Centre Stage’ and the whereabouts of the Assisted Reproductive Technologies. The discussion on Kinship theories and Bengali kinship is also partly based on this work.

4 Moreover, they have all become the subject matters of rather impressive bodies of philosophical thought. In fact we have great theoretical systems firmly based upon just these biological necessities (O'Brien 1981:20).

5 There are three basic reasons for this neglect Here, though, I follow Robertson in tracing the first two reasons regarding the neglect of reproduction in social theory; I would, following Mary O'Brien (1981), like to add upon a third. She sees in this neglect a tyranny of knowledge system. The first is that scholar and thinkers of various persuasions have been more interested in the social significance of other processes – economic production and exchange. The second reason is that reproduction has been obscured by the obsession with one particular social institution – ‘the family’. However, if sociologists talk at great length about family, anthropologists have talked of reproduction only in reference to the complexities of kinship in tribal and peasant communities (Robertson 1991). A third reason can be traced in the male, patriarchal streams of thought, which finds, either ontologically or epistemologically, the processes of reproduction uninteresting at the biological level. The human family or kinship is interesting, but its biological base is simply given. These theorists’ “attitude towards birth is neither neutral, nor accidental nor even conspiratorial. It has a material base, and the base lies in the philosophically neglected and genderically differentiated process of human reproduction itself” (O'Brien 1981:20). Her thesis has been criticized on the ground that it takes biological facts as the grounding factor and hence promotes biological essentialism or determinism.

6 According to Inhorn and Van Balen until 1990s, work on medicalization of reproduction focused largely on contraception, pregnancy and childbirth and ignored infertility to a large extent (2002, cited in Browner and Sargent 2007: 236). In this study, body is taken as a fluid analytical category which may be viewed as “the individual body” (phenomenological sense), “social body”, “and the "body polity"” (Scheper-Hughes and Lock 1987: 7). For a detailed discussion of various theoretical positions on body as exemplified by Durkheim, Mauss, Marx, Foucault, Taussig, Strathern, see Lock (1993).
Reproductive Technologies from a social science perspective. With such a lens, reproduction can no longer be seen as a fundamental unalterable fact of life. Rather, reproduction is seen more and more as constituted in the broadening range of public institutions leaving aside the private domain. It can thus be said that in today's society "in no other area of human life, is the personal as political as in the sphere of human reproduction" (Gupta 2000: 55).

In this context, the growth and proliferation of Assisted Reproductive Technologies as an integral part of the New Reproductive and Genetic Technologies cannot be seen as emerging without a past. These technologies are nothing but the logical extension of obstetrical forceps developed by the Chamberlen brothers as early as the 16th century (Franklin and Flyod 2001). However, the rapid pace with which ARTs has come to our doorstep has not happened till the latter part of twentieth century until Louise Brown, the first test-tube baby, was born in Lancashire, UK, on 28 July 1978 under the care of Dr. Robert G. Edwards and Dr. Patrick Steptoe. Since that day, ARTs have captured the public imagination and with each passing day the so-called miracle technology has been

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8 The term New Reproductive Technologies (referred to hereafter as NRTs) refers to the new technologies designed to intervene in the process of reproduction in three distinct areas. Here, I differ from Michelle Stanworth's (1994: 226-7) classification of NRTs in four sub-categories. As the technologies used in the management of labour and childbirth are not taken into consideration. There is a bit of confusion about what is meant by new reproductive technology. Because of the adjective new it is often solely used to connote technologies such as in vitro fertilization or new technologies used in the field of assisted reproduction. The term old reproductive technology is understood to refer to technologies such as contraceptive-pills, intra-uterine devices as well as sterilization and abortion. However, there are new developments in these areas too. Thus, a clarification is mandatory at the outset: The first and most familiar group of technologies is used for the prevention of conception and birth. These devices of fertility control include contraceptives as well as methods of pregnancy termination. Many of these technologies - diaphragms, intra-uterine devices, sterilization, abortion, and even condoms (which are newly visible) have been known in some form for centuries. Hormone-suppressing contraceptive drugs like Contraceptive Patch, Nuva Ring (Wright 2003) are some of the really new innovations in contraceptive technology in this century.

A second group of reproductive technology is concerned with pre-natal diagnosis and genetic characteristics. It has extended obstetric services backward into the antenatal period for monitoring foetal development in the early stages of pregnancy. Ultrasound has become a new clinical strategy that enabled obstetricians to make direct contact with the foetus, and to acquire detailed knowledge of its physiology. From the mid 1970s, foetal movement counting began to emerge as a "simple low-technology test" superior to other methods for assessing foetal wellbeing. This also became the "basis of a new format of antenatal care" (Grant & Mohide, 1982, quoted in Oakley 1986:289). Technologies in this field aim at improving the health and genetic characteristics of foetuses and the newborn.

The third group of technologies namely Assisted Reproductive technologies is the focus of the present thesis. For a generic discussion on 'The Politics of Reproduction', see Faye Ginsburg and Rayna Rapp (1991).
standardized and has become part and parcel of routine infertility treatment. The overt justification for the sudden proliferation of Assisted Reproduction Technology has been twofold: the sudden impending threat of the infertility epidemic hovering over the world, which demands urgent attention; and the urge of the benevolent doctors and scientific establishment to answer to the desperate needs of women to have children.

The Politics Behind the Infertility Epidemic

Infertility in the recent past has been projected to increase manifold attaining the scale of an epidemic. But this cannot be always substantiated with epidemiological data of infertility, as there is a paucity of facts given the sensitivity of issue and methodological problems in calculating infertility. WHO states that 8-10% of all married couples have a problem in conceiving at some point in their lives (Daar and Merali 2001) and opines that 5% infertility is a "human norm" (Heitmann 1999: 24). According to estimates by the World Health Organization, India accounts for up to 15 percent of the world's infertile couples, a number that can be anywhere between 60 million to 80 million (Dhar 2003). In India, primary and secondary infertility figures, as given in WHO studies, are 3% and 8% respectively. According to the 1998-99 National Family Health Survey in India 3.8% of women between the ages of 40 and 44 years have not had any children and 3.5% of currently married women are declared infecund (Widge 2002). Katiyar argues with the help of statistics that nearly 16 million couples or 32 millions individuals in the 18 to 35 year age group, are afflicted by the problem (1993). In Calcutta, it is currently estimated that one in every six couples find it difficult to have a child whereas, till the late 1990s, the figure was close to one in ten couple (Mandal 2006). According to WHO estimates, in 33 per cent of the cases, the problem lies with the men, in 25 per cent with women, in 25 per cent with both partners, and in 17 per cent of the cases, it is idiopathic (unexplained) infertility (WHO 1989; quoted in Hinduja et al: 2001).

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9 For further readings on this see Prakasamma 1999, Jejeebhoy 1998, Evens 2004 and others.
10 However, the prevalence of infertility is very difficult to access as it is compounded by various social, cultural and political determinants.
11 There are multiple causes for infertility - physiological dysfunctions, preventable causes and unexplained reasons. Anatomical, genetic, endocrinological and immunological problem can all contribute to infertility. Manifestation of infertility in female can be due to – tubal blockage, ovulatory dysfunction, endometriosis,
Absence of substantial epidemiological data however has not hindered the popular and scientific conceptualization of an impending infertility epidemic; nor has it stymied the pace of growth of the ARTs industry. There can neither be an easy correlation nor a cause and effect relationship between growing infertility and standardization of the ‘market’ of conceptive technologies. Though development of ARTs is:

*Often represented as being a response to the “desperate” desires of infertile women, but can as readily be interpreted as a response to the irresistible scientific urge to “unveil” and indeed to redesign “the facts of life”* (Franklin and Davis Floyd 2001: 2).

To Raymond (1993), the introduction, proliferation and standardization of ARTs is not without a past and there does not exist a straightforward relationship between wish fulfillment and benevolence. Rather infertility and ARTs are both creations of the patriarchal discourse and the capitalist market economy12: Hence to understand the script of ARTs as it is written today, it is important to tease out the concept of infertility as it has evolved. According to physician Melvin L. Taymor, infertility can be defined as:

*A lack of fertility, or the inability to produce children. However, because fertility requires a variable time factor for establishment and development of the zygote, the definition for the term infertility, unlike other medical condition, has a time element in its definition* (Quoted in Overall 1987: 139).

It is this time factor that has been manipulated to its utmost advantage to medicalize infertility and label more and more women and men as infertile and in need of technological assistance. This becomes clear once we trace the changing temporal definition of infertility, which has dwindled over the years from five years to two years and then to one. Prior to 1975, a couple was declared infertile if they did not conceive

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12 We would not delve into the rich feminist discourse on New Reproductive Technologies for the present thesis. However, feminists have been diversified in their analysis of technologies – ranging from looking at it as emancipatory (Firestone 1971) to looking at technologies as patriarchal, racist, eugenic and discriminatory (Klein 1994, Corea 1985, Raymond 1993). For a summary of dominant feminist thoughts on New Reproductive Technologies, see Gimenez (1991).
after five years of unprotected coitus, in 1975 the time period was reduced to two years and then in 1988 it was further reduced to one year by the US Office of Technology (Raymond 1993). Indian Council of Medical Research defines infertility as “failure to conceive after at least one year of unprotected coitus”\(^\text{13}\). Some gynecologists advise that investigation of infertility should start after six months in case of women over 35 years of age\(^\text{14}\). In this sense, the so-called epidemic of infertility can surely be said to be made.

In this script, infertility emerges as a disease rather than as a condition. But can infertility be called a disease, the procedures, treatment and those who resort to these technologies, patients? Scientist Leon R. Kass asks this question,

\textit{Is the inability to conceive a disease, or merely the symptom of a disease? Can a couple have a disease (Kass, quoted in Overall 1987: 141)?}

In the same breath it can also be said that reproductive technologies cannot be promoted as therapeutic treatment because these technologies do not treat infertility but only bypass it. In this discourse of infertility and conceptive technologies “more is at stake here than the correction of linguistic imprecisions; the error in language is not innocuous” (Kass, quoted in Overall 1987: 141). As this portrayal of infertility as a disease in need of treatment has been justified and standardized, the use of these expensive technologies on otherwise healthy body has become a routine (Raymond 1993).

It can then be said that both technology and infertility have become socio-political constructs in a market economy where the users of technology are labeled as either patients or as clients – where the former speaks of medicalization of infertility and the latter talks of the commodification of it. Medicalization can be said to be a “two-edged sword” (Finkler 2001: 239). On the one hand, medicalization provides “morally neutral”

\(^{13}\) The clinical definition of infertility also falls short of cultural variations and socio-cultural specificity. In some cultures where strong prescription prevails regarding the optimum number of children, to have less can be considered as childlessness; or in certain cultures childlessness may be equated with not having a son or not having child immediately after marriage (Evens 2004, Giwa-Osagie 2002).

\(^{14}\) Cited from a Brochure of an IVF clinic in New Delhi.
(Heitmann 1999: 24) explanation for otherwise stigmatized condition by reducing social stigma associated with infertility and by projecting the infertile as a *sick* person in need of treatment. But at the same time it writes a script in which submission to the medical establishment and being a *good* patient becomes mandatory. Thus it forecloses the option of not seeking medical attention and standardizes and routinizes the technology.

The Development of ARTs in India

In India, the popular concern with New Reproductive and Genetic Technologies in general and Assisted Reproductive Technologies (ARTs) in particular dates back to the birth of Durga Aggarwal, world’s second successful test-tube baby just a few months after the birth of Louise Brown. The project was performed by a team led by Dr. Subhas Mukherjee (Kumar 1997) in Calcutta. However, due to the lack of proper documentation and peer review this was not officially labeled as the first test-tube baby in India. In 1982, ICMR initiated an IVF project at its National Institute for Research in Reproduction (IRR) in collaboration with King Edwards Memorial Hospital (KEM), Mumbai. On 6th August 1986 “India’s first scientifically documented test-tube baby” (Kumar 1997: 13) Harsha was born. The team was led by Dr. Indira Hinduja and Dr. T.C. Anand Kumar, the former being regarded as the “brain behind the test-tube baby project in India” (Bharadwaj 2000: 67) both in medical and media circles. Almost around this time, several other clinicians in Calcutta (Dr. B.N. Chakroborty and Dr. Sudarshan Ghosh-Dastidar) and in Mumbai (Dr. Sadhana Desai and Dr. Mehroo Hasotia) were successful in their IVF procedures (ICMR 2002).

The development of ARTs in India has started off in the public sector due to the overwhelming concern, ironically, not with infertility but *excessive* fertility and population control. This programmatic link between fertility and infertility is documented in the ICMR Bulletin (1984, cited in Sama 2006):

*In India, tubal sterilization is a widely used method for control of fertility. However, due to high infant and child mortality, several women who have undergone tubal sterilization do seek tubal recanalisation... IVF-ET requires*
comparatively less surgical intervention than tubal recanalisation. If a couple is convinced that pregnancy could be achieved with certainty by the IVF/ET technique, in the event of their losing the existing children, they might readily accept tubal sterilization as a method of family planning. Thus in vitro fertilization could be of great relevance to our national family welfare programme.  

This government initiative later fed into the private sphere due to a crunch of funds and Assisted Reproductive Technologies came to be available solely to that sector. At present, there are an estimated 350 IVF clinics in India (Oza 2006). There has been a steep rise in membership of the Indian Society for Assisted Reproduction, which was set up in 1997, rising from 186 members in 2000 (ICMR 2002) to a current membership of 600 (ICMR 2005). For a population of one billion, it is estimated that approximately 4000,000 IVF cycles will have to be performed annually and this calls for establishment of well-equipped centers (Puri et al 2000). The potential infertility treatment market in the country is estimated on a conservative basis to be over 25,000 crores per year (ICMR 2005). In India, however, due to the absence of a fully functional central registry of Assisted Reproductive Technologies at present, there is no estimate available of exhaustive list of clinics, total numbers of children born from IVF, babies born through donors, surrogates, frozen embryo, fertility rate, pregnancy rate, miscarriage rate, single and multiple births, and other important parameters. Having thus set the stage in which Assisted Reproductive Technologies came to be routinized, we will now turn our attention to spelling out what we mean by the oft-used term ARTs.

Notes on Various Assisted Reproductive Technologies

Conceptive or Assisted Reproductive Technologies are a group of technologies directed to the promotion of non-coital reproduction, either by aiding or stimulating conception or pregnancy and by manipulating sperm and ova outside the body. These conceptive

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15 This logic of understanding fertility issues by indulging in 'techniques of infertility' stems from the then (1984) dominant socio-political global forces, which were solely concerned with population reduction. The opening speech at the International Population Union Conference on the Scientific Study of Population, held in London in 1969, gives a glimpse into the “unobstructed vision for IVF”:

There are grounds for hoping that the use of IVF embryos for research will lead to the discovery of efficient new methods of population control. This is the real justification for promoting and funding of IVF by governments and organization involved in population planning (Potter 1989: 3).
Technologies are highly varied. Technologies in this category, range from artificial insemination, which can be very low-tech, requiring little or no medical intervention – to in vitro fertilization, synonymous with high-tech medicine involving sophisticated, medical, surgical and laboratory procedures (Gupta 2000). Specific technologies in this category of ART\(^\text{16}\) which we would delve into, are described in order to enable us to understand how they can assist, not only reproduction but also relationships, hence produced. The technologies that we will focus on, are – Intra-Uterine Insemination with Donor Sperm or Donor Insemination (DI), In-Vitro fertilization or Test-Tube\(^\text{17}\) Baby, IVF with Donor Egg or Oocyte donation, IVF with Embryo Donation, and Surrogacy\(^\text{18}\).

\(\Rightarrow\) Intra-Uterine insemination

Intra-Uterine Insemination or “gamete transplantation” (Kowles 1985:118) started off as the manual deposition of fresh semen, collected after masturbation, into a female’s vagina with a syringe\(^\text{19}\). It was John Hunter who was the first to perform artificial insemination with donor sperm sometime between 1776 and 1779 (Taymer 1978). However, at present the process of Intra-Uterine Insemination has become much more complicated as it is often carried on as hormone stimulated IUI cycles where the woman has to go for a battery of tests\(^\text{20}\). The man has to undergo semen analysis, which entails an analysis of its

\(^{16}\)Techniques for influencing and ‘assisting’ infertility have improved enormously in the last few decades, but it would be a grave mistake to imagine that assisting reproduction is a modern innovation. Throughout history and at every level of society from the individual, to the community and the state, people have had serious concern with infertility. For a historical analysis see Robertson’s account (1991).

\(^{17}\)The embryo, however, is not fertilized in a test-tube but in a petri dish.

\(^{18}\)There are various other techniques like GIFT (Gamete Intra-Fallopian Transfer), ZIFT (Zygote Intra-Fallopian Transfer), IVF- PESA (Percutaneous Epididymal Sperm Aspiration), and ICSI (Intra-Cytoplasmic Sperm Injection) which we will leave out. We will also leave out the corrective surgical and hormone induced assistance provided which does not strictly fall in the realm of ARTs. We have included IUI with donor sperm though often technically IUI is not considered as part of the gamut of technologies labeled as ARTs.

\(^{19}\)In India the doctor does the insemination. However, technical simplicity in the West during the initial years often enable the husband or partner to inseminate the wife with fresh semen under the doctor’s direction. Or, one woman for another can do it, without any medical intervention. A woman can also do it herself and it is then called ‘self-insemination’ Even though very little technical expertise is required, the medical profession maintains strict control over the procedure. Lesbian women or single heterosexual women, who are not encouraged to go to the ART clinics, generally perform self-insemination. Sperms in this case come either from friends or persons known to them. It may also come from request placed through women’s magazine (Yoxen 1986).

\(^{20}\)This is referred to as “hormonal assay” (IUI Performa of IRM), and includes tests for FSH (Follicle Stimulating Hormone), LH (Leutenizing Hormone), E2 (Estradiol test for ovarian response to stimulation).
volume, count, motility, and morphology. There are two varieties of IUI. One is artificial insemination by husband’s sperm (referred to hereafter, as AIH)\(^{21}\). The other is artificial insemination by a donor’s sperm (referred to hereafter, as AID). The woman takes resort to AIH, because of both female and male infertility\(^{22}\). In case of AID, the process is no doubt similar to AIH but it is used for different reasons. The reasons include male infertility (reduced number or quality of sperm in the semen), male ejaculation into the bladder (rather than through the penis), and the desire to avoid passing on a genetic disorder.

In case of AID, cryopreserved\(^{23}\) donor sperm, which are obtained from sperm banks, are used. In case of AIH, the semen of the partner is washed in a special media and then processed so that the active and most healthy sperms are available, excluding the dead sperms and “debris” cells found in the semen (Brochure, Genomee, The Fertility Clinic, also see Chakravarty et al 1996). This processed sperm is then placed into the uterus of the woman through cathedra at the time of ovulation. The time of ovulation is approximated, based on ultrasound scan and the exact size and development of the follicles. Sperms appear in a woman’s body as if intercourse had taken place, but the procedure is designed to underlie the fact that it did not. The crucial process at play here, is to select the “desirable elements and eliminate undesirable ones” (Mies 1994: 42). This is also true about all other technologies that are listed under that generic name of Assisted Reproductive technologies, be it IVF or any of its variants. In fact, it seems that “without the principle of selection and elimination, the whole technology of reproduction and

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PRL (measures the level of Prolactin hormone), DHEAS (Di-Hydro-Epi-Androsterone-Sulphate) and Insulin etc.

\(^{21}\) We would not include AIH in our present study.

\(^{22}\) It may be that the thin mucus lining the vagina or the outer surface of the cervix is so strong that the sperm cannot survive. The sperm count of the husband may be too low for fertilization and it becomes necessary to be concentrated in the laboratory.

\(^{23}\) Cryopreservation, or freezing, has made it possible for sperms and embryos to be stored for long periods of time (Edwards 1991). In case of sperm banks, donors are screened, so as to rule out infections. The first sperm banks were set up in the US around the end of the 1960s for men who had to be sterilized, and for astronauts who were afraid of becoming infertile. The technical procedure involves the preservation of collected sperms, which are then treated with glycerol, placed in plastic tubes, and stored in liquid nitrogen at -196 Degree Celsius (Kowles 1985). In India, though AID and IVF are becoming routine practices, there are only a handful of sperm banks. A major problem in India is to ensure a regular supply of liquid nitrogen (Gupta 2000). There are three to four semen banks in Delhi as well, but they supply fresh semen (ibid.). There are no sperm banks available in Calcutta as of now.
genetics would make no sense” (Mies 1994: 42). According to the infertility specialists, there is a tremendous demand for AID in India – about 500-600 cases of AID are reported every month (Gupta 2000). The review of internal record by the Institute of Reproductive Medicine showed that the total number of AID or IUI with donor sperm is 355 from a period of January’06 to November’06. The cost of one cycle of IUI with donor semen is Rs. 1600 in which the cost of the semen sample is Rs. 650 in Institute of Reproductive Medicine; the same treatment cycle costs Rs. 5000 in Genomeme, The Fertility Clinic. So there is no standard cost of treatment and it varies from clinic to clinic. The success rate is quoted to be 10%-15%.

**In Vitro Fertilization (IVF)**

In vitro means “within glassware”. In vitro fertilization (IVF) is fertilization of gametes outside the body, in a test tube or petri dish. IVF was originally designed to treat women only when infertility was due to badly damaged fallopian tube (IVF Procedure, IRM). Over the years however, “in a classic example of the technological imperative ...IVF created need for its use that extends far beyond initial indications” (Heitman 1999: 25). Today IVF has become the readymade answer for male factor infertility, for women having POF (Premature Ovarian Failure), and for women whose uterus is either absent from birth, surgically removed, or badly damaged and “distorted” (IVF Procedure, IRM). The procedure technically begins at ovulation, when a physician uses a laproscope to collect freshly released egg cells. The duration of treatment is six to eight weeks. However, pre treatment warm-up/ preparation and extraction of eggs are in themselves laborious processes, which need some mention here in order to understand the medical regime that women undergo both as recipients and as egg donors.

The IVF procedure starts with pre-treatment medical examination on day two or day three (here after referred to as d1/d2/d3 and so on) of menstruation cycle. Along with

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24 A device equipped with a viewing system and a suction tube that can be inserted through a small abdominal incision to reach the ovary.
25 On this day FSH, LH, PRL etc., is tested. Other than this, investigation of the woman also includes testing of Hemoglobin, Blood sugar, VDRL (Veneral Disease Research Laboratory Slide) and others.
preliminary investigation, counselling for the entire phase of the IVF cycle and signing of informed consent forms are carried on. Then the patient is asked to report on d21 of their menstrual cycle or the subsequent cycles according to their booking for IVF, depending both on their convenience and availability of dates (IVF Procedure, IRM; Brochure-Genomee). On d21, the commissioning woman, if she is undergoing IVF with her own eggs or the eggs of a donor, commences on a medication regime with the drug Buserelin for a period of 14 days or the onset of her next menstrual period, whichever is earlier. This GnRH (Gonadotropin-Releasing Hormone) analogue injectable drug is designed to suppress the production of the Follicle Stimulating Hormone (FSH) and Lutenizing Hormone (LH), which activate the growth of ovarian follicles. This process is called down-regulation of the ‘normal’ cycle and is often referred to as “switching off” (Konrad 1998: 649) in day-to-day jargon. After 14 days, further blood examination and ultrasound scan of the woman takes place.

During this time the person from whom ova will be extracted has to take injection of synthetic oestrogen drug called Pergonal. The aim is to either establish ovulation (where a woman does not ovulate), or improve the ovulation process or convert the usually unifollicular monthly ovulation process into a polyfollicular process, to enhance the chance of conception. This is called ovulation induction in which the ovaries are stimulated to produce more than one ovum. This injection is carried on till the eggs mature, which are monitored by regular ultrasound scan, starting from d5/d6 of menstruation. Between 24-38 hours after the last Pergonal injection a final intra-muscular injection of Human Chorionic Gonadotropin (Profasci) is administered to generate Lutenizing Hormone which will in turn release the most mature eggs from the follicles. Trans Vaginal Ultrasound Directed Oocyte Recovery (TUDOR) retrieves eggs once they are matured. Then eggs are examined under microscope and are kept in the incubator for a few hours. The captured mature egg (or eggs) is then put in a glass dish and mixed with

Screenings for HIV and Hep-B are also performed. A pre-treatment scan of the pelvis is performed on the sixth or seventh day of menstruation (once the women are “clean”) (IRM. IVF procedure). For the male partner, investigation includes detection of HIV and Hep-B status and semen analysis to detect sperm quantity, morphology, and quality.
processed sperm in a sterile culture/nutrient media, which is a chemical solution to support the growth of embryo (IRM, IVF Procedure).

Embryo is created by keeping the egg and sperm in the incubator at normal body temperature for 48 hours. It can sometimes be kept to a period of maximum five days so that the embryo reaches the blastocyst stage before transfer. 60% to 80% of the eggs are fertilized but the rest remain unfertilized and degenerate. Two-three embryos are then transferred to the recipient’s uterus and the rest are frozen and cryopreserved for future use. The result of chemical pregnancy is known after 15 days of embryo transfer. This procedure is called long down regulation protocol. There is, alternatively, a short protocol regime where the treatment duration is 14 days in which GnRH down regulation starts on d2 followed by ovarian stimulation on d3. However, result with the short protocol is thought to be less encouraging. The resulting offspring is often called a test tube baby even though it is within glassware for only two or three days of its pre-birth development (Kowles 1985). In case where frozen embryos have to be transferred in subsequent cycles it is advised to get it done preferably within one year of egg recovery.

In these cases, regulation of recipient’s own reproductive (pituitary hormone - oestrogen and progesterone) hormone with GnRH analogue is done. Stimulating the endometrium to grow directly with exogenously administered calculated dose of ovarian hormone follows it. If this does not yield desired result then mild ovarian stimulation is carried on without down regulation or endometrial preparation in natural cycle. Treatment of the recipient after the preliminary investigation starts on d21 with daily injection of GnRH analogue for down regulation of the recipient’s natural cycle as mentioned in case of IVF. This is carried on till the next 14 days or next menstrual cycle whichever is earlier. If the

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26 Frozen embryo transfer is prescribed on following grounds:
- In cases where embryo is not transferred in the first attempt along with egg retrieval due to OHSS, (Ovarion Hyper Stimulation Syndrome) bleeding in uterus, inappropriate formation of endometrium lining;
- In cases where pregnancy were not ‘achieved’ in the first attempt and embryo were cryopreserved to be used in the next cycle;
- In cases of Donor egg IVF;
- In cases of IVF with surrogacy;
- In cases of IVF with donor embryo.

27 This process is called ‘Down-regulation’.
blood examination after this is satisfactory, tablet Progynova in gradually increased dose is given for preparation of endometrium lining. This is monitored regularly by USG scan from d8 till optimum thickness is achieved. The optimum (7 mm to 10.5mm) thickness is expected by d11/d13. Then progesterone tablet is administered for the next two days in addition to the ongoing medication to improve the quality and thickness of endometrium where the embryo will be implanted. If this is not achieved by d19, the cycle is cancelled. The success rate with frozen embryo is claimed to be 30%-40% (IVF procedure, IRM). The cost for the transfer of frozen embryo is Rs. 20,000-25000.

However, none of these techniques cures infertility and the success rate is as low as 5%-22% per cycle (Gupta 2000:363). The success rate of this technique varies widely – whereas IRM brochure quotes it to be 30%-35% and that it reduces if the age of the woman is more than 35 years and the take home baby rate as 20%-25%; Ghosh-Dastidar Institute of Fertility Research quotes that “50% success rate is achieved in some cycle” (Brochure GDIFR). A WHO study on infertility conducted in 2001 says that the best clinics in India claim a 30-40% success rate, “but it seems to be much lower in reality” (Dhar 2003). A world collaborative report on IVF recorded success rate as 25% live birth per cycle until the age of 34 years, when there is steep decline (Fathalla 2002). This means a failure rate of 75% and that the whole procedure has to be repeated several times for a single conception and, of course, several times over in case more children are desired. The success rate varies depending on patient selection – the age of the woman, time of diagnosis of the problem, length of infertility, previous attempts and quality of facility where treatment is provided. Misrepresentation of success rate has been a serious concern. For a couple, success as much might mean taking home a baby, in the field of reproductive technology, pregnancies that are not carried to term are also included in the statistics. Thus, one encounters concepts of implantation rate, chemical pregnancy rate, live birth rate and take home baby rate.

IVF is the most complex of ART, and as such it has many long and short-term health risks. The drugs used and the procedure itself can inflict pain and suffering to the woman who undergoes it. Even if the treatment is successful, there are greater chances of a
caesarian section or multiple births, both of which run higher health risks (Zalewski 2000). The risk, complication and the side effects of the drugs used includes Ovarian Hyperstimulation Syndrome (OHSS), multiple pregnancy (20%-30%), miscarriage (20%-25%), ectopic (3%-5%) and heterotopic pregnancy and risk of infection (1%) (For details on health risks and side effects, see Gupta 2000, Sama 2006). The cost involved for one IVF cycle is Rs. 65000 to 75000 approximately (IVF Procedure, IRM).28

> IVF with Donor Egg

IVF with Oocyte or egg donation is now becoming an accepted form of assisted conception treatment (Mukhopadhaya 2005). It offers an opportunity for a selected group of patients to achieve pregnancy and a live birth. IVF with egg donation is indicated for women with impending/established Premature Ovarian Failure (POF) or natural menopause, for women who are carrier of genetic diseases, women who have had recurrent failures of IVF treatment and for women over 37 years of age (IVF Procedure, IRM). Women above the age of 37, even if they are menstruating, may not have eggs in their ovaries or good quality eggs for that matter. The ovarian reserve (presence of good quality eggs) may be known by estimation of blood hormone (FSH) on d1/d2/d3 of menstruation. In case FSH level is high and “she is desperate” (IVF Procedure, IRM) for pregnancy she will require IVF with egg donation. The recipients are generally asked to procure donors29. The preferred donor by the clinic is a family member on the woman’s/wife’s side or any other woman within her reproductive years who agrees voluntarily or on payment. The donor should be less than 35 years of age and should have a family (read a husband and one child, at least). She along with her husband is required to sign an informed consent form at the clinic.

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28 Data regarding side effect and complications were only available in case of IRM. Other institutes were reluctant to provide any information regarding this. The technical description of the procedures is partly based on my interaction with the providers.

29 All the clinics in Calcutta as of now bestow the responsibility of procuring the donors or surrogates by recipients. But there are clinics in Mumbai who have donor programme running in which they have a list of egg donors (Personal communication).
Although oocyte donation should parallel the donation of sperm, the former is clearly different from the latter. The egg donors have to undergo the entire medical regime of egg ‘production’ and ‘extraction’ that has been discussed in case of IVF\(^\text{30}\). Hence in many cases, the donor is a sister, elder brother’s wife or a close friend who wishes to donate the eggs. Usually six to fifteen eggs (may be even 30-40 on rare occasions) are recovered in the initial treatment cycle as the donor’s age is below 35 years and she does have normal cycles. Of these 60%-80% eggs are fertilized. Of these two to three are transferred in the first cycle and the rest are cryopreserved. The recipient woman’s menstrual cycle is synchronized with the donor so that transfer of fresh embryo can take place but if it is not possible then frozen embryo is transferred. After egg recovery the donor is said to “have no more function to perform” (IVF Procedure, IRM).

**IVF with Donor Embryo**

Embryo donation (Matthews 2005) is a well-established and successful form of ART where both partners are sub-fertile\(^\text{31}\). This is carried on specifically when the husband does not have sperms in his semen and even in his testes, as determined by testicular biopsy, Fine Needle Aspiration Cytology (FNAC) or trial Percutaneous Epididymal Sperm Aspiration (PESA); the wife also has suffered POF (Premature Ovarian Failure) or has reached the age of menopause and the couple is unwilling to accept adoption. Surplus embryo following embryo transfer in IVF cycles is generally preserved. In order to avoid excessive cooling, cryoprotectant is used. Even then only about 60%-80% of the embryos survive and the rest die. Embryos can be preserved for a maximum period of five years (IVF procedure IRM). In case the prospective embryo donor conceives in her first attempt the successful couple is given options by the clinic about the ways in which, surplus embryos are to be handled by the clinic:

- The embryos might be cryopreserved for their own future use if they want a second child;

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\(^{30}\) She will have to take all injections starting from d21 till eggs are retrieved.  
\(^{31}\) It is most applicable to menopausal women with sub-fertile partners.
• Embryos might be given for donation to other couples undergoing IVF treatment or
• The embryos can be used for research purpose.

For the latter two cases, informed consent forms need to be duly signed by both the partners32. If the embryos are not claimed within the next five years, then it becomes the property of the clinic. Embryos are voluntarily donated hence no cost is levied for the embryo. But the cost of the cryopreservation, laboratory disposables and transfer procedure approximate to Rs. 20000 to 25000. Embryo donation achieves pregnancy and live birth similar to oocyte donation. But the former costs less and is medically less risky than the latter, as it does not involve ovarian hyper-stimulation. At present, in India, the source of embryos for donation is the ‘spare’ embryos of IVF cycle. However, embryo banks are coming up in the West where embryos are created with the specific purpose of donating.

> IVF with Surrogacy Arrangement

Surrogacy “is a procedure in which a woman acts as a temporary mother by allowing her womb (uterus) to carry a pregnancy for another couple. The woman who carries the pregnancy on behalf of the recipient couple is known as the surrogate mother” (IVF Procedure IRM). There has always been confusion on the definition of different forms of surrogacy. It is a common practice to use the term surrogate mother or surrogate for the woman who carries and delivers the baby, genetically not her own. Others would argue, however, that it is the woman who rears the child is the surrogate, rather than the one giving birth. Further confusion is added, as the woman who gives birth is initially the legal mother of the child. It is the variation within the surrogate practice itself which led to this confusion. There is ‘genetic’, ‘natural’, or ‘partial’ surrogacy; and ‘gestational’ or ‘full’ surrogacy.

32 For a discussion on ‘good consenting practices’ and ‘robust’ informed consent procedures in case of embryo donation, see Franklin (2006b).
With natural surrogacy, the intended "host" is inseminated with the semen of the husband of the genetic couple. Any resulting child is therefore related to the "host". Gestational surrogacy is defined as the treatment by which the gametes of the genetic couple ('commissioning couple' or intended parents) are used to produce embryos and these are then subsequently transferred to a woman who agrees to act as the "host" of these embryos (Brinsden 2005). The surrogate "host" is therefore genetically unrelated to any offspring born as a result of this arrangement. The former can be taken as the classical model of surrogacy – when the egg cells are the surrogate's own and she also provides her uterus. In such situations, the recipient man will only have "50% genetic contribution and, hence, adoption needs to be seriously thought of" (IVF Procedure, IRM). Informed consent is essential from both recipient couple and surrogate and her husband when surrogacy is attempted. The indication for attempting surrogacy is absence of uterus either at birth or for latter surgical necessity, or tumor or repeated IVF failure. The criteria for the surrogate are the following: she should be married and must have at least one child, her age should preferably be below 40, and she must be free from HIV, HbsAg (Hepatitis B surface Antigen) and sexually transmitted diseases. She should not be suffering from high blood pressure, diabetes or heart disease. "Surrogate mothers are not available at any ART clinic" (IVF Procedure, IRM). Surrogate mother can be obtained through advertisements placed by the couple.

A relative, a known person as well as one unknown to the couple but willing to help either voluntarily or on payment may act as the surrogate mother. In case of a relative acting as a surrogate, the relative should belong to the same generation as of the woman seeking the surrogate. For achieving pregnancy through surrogacy, egg and sperm have to be collected and fertilized in the laboratory as in conventional IVF cycle. Embryos hence created are frozen and cryopreserved. Surrogate mother is then "prepared" for frozen embryo transfer. She would require "care" throughout pregnancy and "should be delivered" in a well-equipped hospital or in a nursing home under expert supervision because this is a "valuable pregnancy" (IVF procedure IRM). IVF surrogacy was not
common as late as “not many women were eager to lend their uterus” However, there has been a sea change in the last couple of years. In the couple of weeks around February end-March beginning, 2007 there have been four cases of surrogacy reported in both national and daily newspapers in Calcutta of which three couples were from Karnataka, US, and Canada and the fourth was an elderly couple from Calcutta itself (The Times of India, Kolkata, March 7, 2007).

We have detailed out the ART procedures as that backgrounds our study in the remainder of the thesis. The understanding of the techniques gives us a leverage to pinpoint as to where, when and how ARTs match, coincide, and question our understanding of conception and pregnancy. As we now have a clear idea of the way in which these technologies assist or manage reproduction, we are equipped to identify the specific ramification that these technologies might uphold in our understanding of parenthood, identity and potential to complicate our ideas and practices regarding these. However, to do so, we would also need a sound theoretical base which will give us the lens and the framework to tease out the implicit and explicit implications of ARTs and kinship.

II. The Theoretical Framework

In an attempt to find ways to comprehend and analyze complex nuances of social relationships, identity formation and human agency that these techniques have the potential to raise, I have derived inspiration, legitimation and guidance from the rich theoretical debates in anthropology in 1960s (Schneider 1968, reprinted 1980, 1984; Gellner 1960, 1973, Needham 1960, 1971) carried forward by feminist anthropology in 1990s (Yanagisako and Collier 1987, Strathern 1992 a & b) which were further finely intersected by feminist science studies (Franklin 1995a&b, 2001b, Haraway 1997). These multiple theoretical strands will help us to understand people’s assumption about the significance of biology in the creation of relationships and their perception about the basics of kinship.

This idea is put forth by Dr Anoop Kumar Gupta, Medical Director and Infertility Specialist of the Delhi In-Vitro Fertilization Center (Gupta 2000).
It becomes mandatory for the present study to decipher the meaning of kinship as it has evolved in the course of kinship studies. It is only with this understanding that we will be able to fathom the richness of the concept of kinship, which will in turn feed into the way we look at present situation of doing kinship. It is, however, futile to say at the outset that an exhaustive review of the concept of kinship is not feasible. This is because of the long history of "anthropology's romantic yet highly ambivalent relationship to the study of kinship" which started off with the American lawyer L.H. Morgan and dates back to the mid-to-late 1800s (Peletz 1995: 344). We will, hence, concentrate our attention specifically on studies of kinship as symbols and cultural analysis of meaning focusing on the primary thesis emphasized by Schneider and the ways in which his approach has been critiqued, restructured and built upon.

Following Morgan (1877), there had been an upsurge in understanding kinship which remained anthropology's "signature ... in trade" (Faubion 1996: 67) till the second half of the 20th century (Stone 2001). From 1970s onwards this enthralment of kinship started fading away projecting a probability that "kinship is dead" (Faubion 1996: 67). This steep departure from kinship studies occurred in the hands of Edmund Leach (1961, 1968), Rodney Needham (1960) and David Schneider (1984) who critically re-looked into the basic assumptions of kinship and questioned the centrality of kinship terminologies, rules of descent and marriage in the discourse of anthropology. At the heart of this theoretical debate, the unrelenting question has been the significance of biological fact as the universal base for social relationships (Stone 2001, Carsten 2001, 2004, Franklin 2001b). These questioning by Gellner (1957) and Rodney Needham (1960) led to the rejection of structural-functionalist paradigm for understanding kinship as advocated by Radcliffe Brown (1952), Evans Pritchard (1951) and Meyer Fortes (1969, 1969).
Schneider's Thesis on American Kinship

The most prominent critique of kinship as a universal feature of human society based on the biological fact of heterosexual reproduction and shared biogenetic substance can be attributed to David Schneider (1968, 1984). Schneider criticized two most primary suppositions within kinship theory viz., the "Doctrine of Genealogical Unity of Mankind" which states "genealogical relations are same in every culture" and the assumption that "blood is thicker than water" which makes "kinship or genealogical relations unlike any other social bond" (1984: 174). He criticized both these tenets on the ground that they have been informed by Euro-American understanding of kinship. Schneider takes his position close to Needham but agrees with Gellner that, for Euro-Americans, biological reproduction forms the grounding assumptions about kinship. In his exemplary monograph on American Kinship (1968, reprinted 1980), Schneider, unlike Malinowski (1913), urges that his book is, 

Not an account of what Americans say when they talk about kinship...[or of] what Americans think ... about kinship. It is... not... a description of roles and relationships, which Americans...undertake...[it] is about symbols (1968:18).

In Schneider's exposition sexual reproduction is the core symbol of American kinship which is defined by two dominant orders, that of nature or substance and that of law or code of conduct. The sexual union of two unrelated partners in marriage provides the symbolic link between the "Order of Nature" and "Order of law". Schneider upholds that the Order of Nature and Order of Law worked separately and together producing three classes of kin - (i) those related in nature; for example, illegitimate child, (ii) those related in law; for example, those related by marriage, and (iii) those related by blood or both in Nature and Law (1968, reprinted 1980: 27-28). Schneider notes that "substance

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34 Roy Wagner moves on from Schneider and also looks at the notion of incest as being peculiar to a particular cultural understanding. He claims, "the illusion of incest taboo can only be sustained by a belief in 'real' or objective kinship, for if 'siblings' are different things in different cultures, how can 'sibling incest' be the same thing in all of them" (1972: 610)?

35 To Gellner, an ideal language for kinship theory could be developed based on numerous probable kinds of biological relations (1960, reprinted 1973, 1980). In contrast, Needham argued that against the standard anthropological belief of kinship as a matter of "flesh and blood", "biology is one matter and descent is quite another, of a different order" (1960:97). While kinship, to Gellner is a universal anthropological category to understand human society; to Needham it is people's own expression of social relationship.
has the highest value, code for conduct less value, but the two together have the highest value of all"; for example, mother, father, daughter, son etc. (1968, reprinted 1980:63). The child's natural mother and father are given and fixed forever at the time of birth and blood is a state of "shared biogenetic substance" (1968, reprinted 1980: 107), transmitted from parents to children symbolising "diffuse, enduring solidarity" (ibid.: 116). In contrast, individuals through their own customs and habits impose the order of nature. Hence, the obligations and privileges deriving from the Order of Law as a code for conduct though "culturally natural" (Allan 1979: 31) is not seen as part of the order of nature as it can be severed and terminated. Thus, "the family...formed according to the laws of nature.....lives by rules which are regarded by Americans as self evidently natural"(1968, reprinted 1980:34). He went on to say:

What is out there in nature, say the definition of American culture, is what kinship is. Kinship is the blood relationship, the fact of shared biogenetic substance. Kinship is the mother's bond of flesh and blood with her child, and her maternal instinct is a love for it. This is nature; these are natural things; these are the ways of nature. To be otherwise is unnatural, artificial, and contrary to nature (1968, reprinted 1980:107).

Thus to Schneider blood and biogenetic substance are natural substances having the highest value to imbibe feelings of being related. However, he views that these biological facts on which the cultural order is being built is different in essence from the biological facts themselves. In his conceptualization clear-cut boundaries exist between both nature and culture and between substance and code, which are cultural derivatives, based on the pre-given apriori biological facts:

These are biological facts ... There is also a system of constructs in American culture about those biological facts. That system exists in an adjusted and adjustable relationship with the biological facts. But these same cultural constructs which depict these biological facts have another quality... which means that they represent something other than what they are, over and above and in addition to their existence as biological facts and as cultural constructs about biological facts (1968, reprinted 1980:116).

To Schneider, however, such association between nature and culture, substance and code, far from being universal, is the unique feature of Euro American construct of kinship.
These emphatic claims, that “robbed off its grounding in biology, kinship is nothing” (Schneider 1984:112) and “it’s simply not possible to conceive of genealogy without the model of pedigree” (1984:55), later became the dominant framework to question Eurocentric bias in anthropological theorizing. The idea that kinship can be debased from biology became so prominent that under the pressure of his critique nearly a whole generation of anthropologists largely expunged the use of kinship as an analytical category. The shift away from kinship can also be attributed partly to the general shift in anthropological understanding from structure to practice, and from practice to discourse (Peletz 1995, Carsten 2000a). This was part of a wider recasting of social and cultural life, which involved the breaking down of discrete domains of economics, politics, religion, and kinship, which had defined and compartmentalized anthropology earlier.

The New Wave of Kinship Studies

This sudden silence, however, was not the signifier of the complete collapse of kinship but rather a period in which the ground was being prepared for kinship studies to make a come back with much more vigour and depth. Schneider himself points out that there is an upsurge in the genre of kinship studies and “phoenix like it’s risen from its ashes” (1995, quoted in Lamphere 2001: 21). He attributes this revival of understanding of kinship to the generation of work situated at the crossroad of feminist anthropology, medical anthropology and feminist question in science studies. This revival can also be attributed to Schneider himself as a new genre of anthropology in the twentieth century emerged both by:

- Building on Schneider’s concept, which resisted the perception of naturalised difference as universal and timeless basis for kinship: This line of reasoning also became an important tool to be used for understanding “symbolic organization of gender” (Tsing and Yanagisako 1983: 511, Butler 1990), reproduction and family (Yanagisako 1978, Collier et al 1997).
Delving into the critical analysis of the constructs of natural or biological substance and code in Schneider's thesis: The notion of substance, code of conduct and nature and biology which were the grounding block of Schneider's thesis opens up avenues through which Marilyn Strathern (1992 a & b), Janet Carsten (2001a, 2004) and Sarah Franklin (1995a, 1997) try to unravel the complex nuances of not only kinship but ownership, commodification and knowledge.

Building on Schneider's argument, feminist anthropologists (Yanagisako and Collier 1987, Strathern 1992a&b) have claimed that, for long, both kinship and gender have been seen only in relation to natural biogenetic facts. Jane Collier and Sylvia Yanagisako (1987), continuing the argument, stated:

Much of what is written about the atoms of kinship (Levi-Strauss 1969), the axiom of prescriptive altruism (Fortes 1958, 1969), the universality of family (Fox 1967), and the centrality of mother-child bond (Goodenough 1970) is rooted in assumptions about the natural characteristics of women and men and their natural roles in sexual procreation. The standard units of our genealogies, after all, are circles and triangles about which we assume a number of things. Above all, we take for granted that they represent two naturally different categories of people and that the natural difference between them is the basis for human reproduction and therefore, kinship (1987: 32).

This taken for granted “difference” as a “pre-social fact ...existing outside of and beyond culture” and “the natural facts” of sex, procreation as the “universal raw material” have been the major flaw of both kinship and gender studies (1987:29, Collier et al 1997). In an attempt to see sex and gender as historically specific rather than predetermined, the focus has been to look at the production of knowledge system which validate and naturalizes, legitimizes, and authorizes such basing as the absolute and indisputable ingredient for identity formation. Thus, according to Haraway, “gender is a concept developed in order to contest the naturalization of sexual difference” (1991:131).

Following this line of argument, Judith Butler (1990) questions the belief that “being female constitutes a ‘natural fact’”. In so doing, she locates the “foundational categories of identity ...as productions that create the effect of the natural, the original and the
inevitable” (1990: x). By dismissing the ways in which “gender fables establish and circulate the misnomer of natural facts” (ibid.: 33), she propagates “the analysis that assumes nature to be singular and prediscursive cannot ask, what qualifies as ‘nature’ within a given cultural context, and for what purposes” (ibid.: 37)? Thus, running parallel to Schneider in her urge to debase gender from biological base, she views that the task of differentiating sex and gender would assume new meaning with sex no longer meaning the apriori scientific biological base on which model of gender can be erected\textsuperscript{36}. As such this analytical concept will help us to locate the diverse meanings of masculinity and femininity in distinction to the presumably fixed categories of male and female (Keller 1995). Gender as an analytical concept then will also be a “silent organizers of the cognitive and discursive maps of the social and natural worlds that we, as humans, simultaneously inhabit and construct” (Keller 1995: 29).

\textbf{Nature and Biology: Symbolic Idiom beyond Schneider}

Denaturalization of kinship started off by critically looking at the analytical categories fundamental to Schneider’s reconceptualization of kinship, namely nature, substance, and biology. Franklin traces that the word “natural” or “biological” communicates three distinct meanings in Schneider’s exposition – (i) “biogenetic substance”; (ii) nature as in “what animals do”; and (iii) human nature as in “man is a special part of nature” (1997: 54). Franklin makes obvious this tension within the concept of nature as a consistent infallible symbolic idiom in kinship. She articulates that what it means to be natural and biological is ambiguous throughout Schneider’s thesis:

\textit{On the one hand, Schneider was arguing that there is no such thing as a biological fact per se in American kinship systems – there are only cultural interpretations of them. On the other hand, he was also arguing that there are ‘natural facts’ within science which are true and which are separate from the cultural constructions of them (1997:55).}

\textsuperscript{36} In fact Butler carries her argument forward and asks the pertinent question, “is kinship always heterosexual” (Butler 2002: 14)? Schneider, however, towards the end of his thesis (1997) himself poses such questions: “what kind of institutionalized arrangements might be possible and likely for gays and lesbians to develop that would both celebrate their difference (or differences) ...” (Schneider 1997)
Franklin (2001b) also thrusts herself the task to review Schneider’s notion of “biology, biologization, and biological facts, arguing that they have meant quite different things to different commentators, both in relation to kinship and more generally” (2001b: 302). Biology according to Franklin refers “both to a body of authoritative knowledge (as in the science of reproductive biology)” and “a set of phenomena (as in the biology of human reproduction)” (2001b: 303). By juxtaposing “a system of knowledge with its objects” what happens is that “study of biology becomes coterminous with the existence of an ontological reality that exists ‘out there’ in the ‘real’ world as a set of actual ‘facts’” (ibid.). In doing so Schneider attributes a certain rigidity, fixity and self contained view of both nature and biology. However, to cast biology with such indiscriminate authority is to forget that, like kinship and gender, biology and nature are historically and culturally specific to a particular locale and its way of life. Schneider claimed that “kinship is whatever the biological relationship is. If science discovers new facts about biogenetic relationship, then that is what kinship is and was all along” (1968, reprinted 1980: 23); what Franklin (2001b) draws our attention to is that in the era where biology has become visible like never before, this fluidity “undoes the very fixity that the biological tie used to represent” (2001b: 314). She views nature and biology as separate and distinct realms of scientific fact which can no longer hold true in the face of technological reproduction.

This idea of nature as volatile and within the realm of human intervention has been put forth consistently by Marilyn Strathern (1992a & b) both through her ethnographic work in Melanesia and her examination of NRGTS in Euro-American context:

*Nature at once intrinsic characteristic and external environment, constituted both the given facts of the world and the world as context for facts...Although it could be made into a metaphor or seen to be the object of human activity, it also had the status of a prior fact, a condition for existence. Nature was thus a condition for knowledge. It crucially controlled, we might say, a relational view between whatever was taken as internal (nature) and as external (nature) (1992a: 194).*

In this contemporary narrative, nature does not cease to exist but becomes more evident and explicit in the daily course of human existence. But this overtness robs of the “grounding function” (Strathern 1992a: 195) of nature and biology, which till date have
been identified as unchangeable, fixed and devoid of human intervention. As Strathern puts it:

_In the case of kinship what is at issue is the social construction of natural facts. At the same time, established critiques, including those from anthropology, make it evident that what are taken, as natural facts are themselves social construction. What is revealed is another hybrid (1992b: 17)._ 

It is made clear that what was thought to be given and impenetrable has become a matter of choice, and intervention and nature has been “enterprised up” (ibid.: 30). However, Strathern believes that though this has come out in the open with the technological intervention in reproduction, “there always was a choice as to whether or not biology is made the foundation of relationships” (Strathern 1993, cited in Hayden 1995:45). Strathern views that Schneider’s formulation of biogenetic substance is a post Darwinian artifact that bases itself on Darwinian notion of genealogy which, far from being a naturalized concept, is a social one. However, in Schneider’s formulation genealogy for a Euro-American is natural which becomes the starting point to talk about natural relative, natural family and real or natural parents (Strathem 1992a & b). This assertion helps to perpetuate a model in which natural and social order become polar opposites and in contradiction with each other. Strathem questions the standoffishness of such a dichotomy (1991, 1992a&b, 1996) and thus locates a shift in not only anthropological theorizing but also in the cultural practice of doing kinship as well. There is hence, a crumbling of the social and natural as distinct domains but what emerges, is “biosociality” (Rabinow 1996:99) in which nature is socialized and nature emerges as culture37. With New Reproductive and Genetic Technologies, kinship is no longer crafted in tune with nature but in contrast, crafted “on culture” and through ‘culturization’ of the natural it has become “artificial”(1996: 99). Thus, while Schneider uprooted kinship from biology, biology in itself is given a jolt, and made unfamiliar, fluid, and uncertain.

In the light of the meanings that nature, culture, biology assumes, "[f]lesh, life and nature are no less rooted in specific histories, practices, languages and people than biology itself" (Haraway 1997: 217). In the context of NRGTs, it becomes apparent that nature and natural world including the facts of human biology, can no longer be taken for granted (Strathern 1992 b). NRGTs have made possible tampering of biological fact/s, which till date, were seen as unchangeable and fixed. The very fact that NRGTs claim to assist nature and lend supporting hand, makes it difficult to think of nature as something beyond manipulation and negotiation:

*The more nature is assisted by technology, and the more social recognition of parenthood is circumscribed by legislation, the more difficult it becomes to think of nature as independent of social intervention (Strathern 1992 b: 30).*

As,

*Natural facts of procreation are being assisted by technological and medical advances. The social facts of kin recognition and relatedness are being assisted by legislation. Kinship is doubly assisted (1992 b: 20).*

NRGTs open up "reproductive options, indicating a vision of biology under control, of families free to find their own form" (Strathern 1992 b: 33). Thus what was the taken for granted base for kinship now becomes destabilized as transference of biogenetic substance does not necessarily constitute what Schneider called "relative by blood" (1968, reprinted 1980: 25). In this field of technological assistance, reproduction which has been the ground for kinship, is itself set amidst "major set of cultural redefinitions and (literal) reconstructions" as this is an outcome of the "convergence between two branches of science-genetics and embryology" of "scientific assistance" (Franklin 1995a: 326). In these narratives conception is not only assisted but also achieved. As Franklin puts it,

*What was once a private act of love, intimacy and secrecy is now a public act, a commercial transaction, and a professionally managed "procedure" and a "successful" conception and pregnancy is an "achievement" (1995: 336).*
In this discourse, the natural facts have lost their certainty as which of the biological components will be translated in kin relation is no more fixed or permanent. Technology has become primary in crafting relation, the authority that was earlier thought to rest with biological facts of nature. But this foundational aspect of technology is also temporary and fluid because at the focal point of medical technologies and human intervention lies the zeal to assume unrestrained possibilities (Franklin 1995a). Technology thus becomes an important anthropological tool to understand human reality as they compromise "materialized figurations" (Haraway 1997: 11) that are "arrangements of material and discursive practice brought into more and less coherent relation, which in turn shape human experience" (Suchman 2004: 2).

On the one hand technology is seen to assist nature and so this intervention is legitimized and naturalized. Technology is hence seen as "enabling" and "intervention has become a symbol of interference" (Strathern 1992a: 47). This makes Strathern claim that with NRGTs, kinship is stripped off its "naturalness". But at the same time technology also attempts to displace nature from its preconceived rootedness by tampering with its components. This is what makes Strathern comment, "if nature has not disappeared, then its grounding function has" (1992a: 195). To Haraway, nature is being built but not only by humans alone. It also includes construction among humans and non-humans (1997). By giving "nature a helping hand" and becoming "just like nature" (Franklin 1997: 209-10) science becomes part of the cultural order whose mode of operating is defined by a particular cultural ideology and historical positionality. This leads Strathern to explore the cultural ramification of the "demise of the reproductive model of the modern epoch" in which individuals cannot coexist both as social construction and as biologically given (1992a: 193). Kinship, which was in Euro-American construction, a "microcosm of relationship between nature, society and symbol" (ibid.: 198), cease to exist in the age of choice and human intervention. So much so that as in the human genome projects "replicators that need no base in biological substance merely imagine for us a cultural future that will need no base in ideas of human reproduction" (ibid.). Strathern (1992a&b) thus builds on Schneider in showing the centrality of biological facts in the
conceptualization of relatedness in case of Euro-American thinking, but differs in her understanding of fixity of biological facts (Carsten 2000a, 2004).

Substance: An Analytical Construct

Carsten (2001) drawing from the ethnographic work of Jeanette Edwards (1992, cited in Carsten 2001) from North West England and Gerd Baumann’s (1995, cited in Carsten 2001) portrait of the mixed ethnic setting of London suburb puts forth that shared biogenetic substance alone does not define kin relationship consistently even in Euro-American understanding. Based on these local ethnographies, she articulates that relationship “between blood and biogenetic substance is less straight forward than Schneider appears to assume” (Carsten 2001:32) as neither kinship is defined in terms of biogenetic substance alone nor are substance and code in strict opposition. In contrast to the dominant discourse, ties that last are defined as kinship (ibid.: 33). This provides impetus for Carsten to take a relook at the notion of substance attributing to it fluidity to encompass a wide array of meanings and symbol. She argues that the word substance has had different connotations – “vital part” or “essence”; “separate distinct thing; that which underlies phenomena”; and “corporeal matter” (2001: 29) and has been used differently as an analytical concept depending on the specific locale which has been under anthropological scrutiny. It is this “breadth of meaning” (2001: 49) that has made substance an analytical concept which can be applied to diverse locales.

To look at substance as a fluid concept, is to question the rigid opposition between substance and code of conduct which Schneider emphasises on. Rather than being a rigid particularistic category through which only American kinship becomes visible, substance emerges as a fluid concept. It is this ambiguity, fluidity, volatility and vastness of the notion of substance that has made it a central category for understanding relatedness both in the West and the East. In doing so, substance as an analytical category, often conveys

38 Also see, Carsten (2004) for a detailed discussion on uses and abuses of the analytical construct of substance.
39 Weston (1991, cited in Hayden 1995) also suggests in her analysis of lesbian and gay kinship, that they define kinship not only by preexisting blood ties but also through their intent to be related to someone else out of choice. Here, the “performative” (Peletz 1995: 364) aspects of kinship are important.
usage which does not necessarily correspond to its dictionary meaning nor to what Schneider meant, when he used the term (Carsten 2001). So much so that in some non-Western locales and in some particular Western settings as well, substance came to mean "relationality", the "processes of conversion, transformation, and flow between the very domains that anthropological analysis distinguished" (2001: 49). To Carsten, this "co-optation of substance to express mutability and transformability, the flow of objects or bodily parts between persons, and the capacity to stand for the relations between those persons, indicate a gap in the anaytical vocabulary of kinship" (2001:49). However at the same time, substance "neatly filled the gap" (ibid.:50).

In this reconceptualization biology, nature and substance become fluid concepts and strict watertight compartmentalization of these which pervades the entire thesis of Schneider, is brought into question. Following this argument further, Beteille views

"The flaw in Schneider's argument, it seems to me, lies in his belief that code can be completely separated from substance within the framework of American culture. The two may be indeed be considered separately for many purposes and in many contexts, but only upto a point and within certain limits (1990:496)."

These portrayal of both substance and nature in which both have a fluid existence leads one to question the assertion that there is a single system of kinship with its symbols and meanings having similar connotation across gender, race, class and geographic regions. This assertion of Schneider has its roots in Parsonian view of culture as a perfect whole characterized by a high degree of uniformity and internal coherence (Peletz 1995). This has led to the corollary "assumption that symbols and meanings are less contextually variable than normative rules for action" (Yanagisako 1978a: 26-27). The understanding of this reality where symbolic structure of kinship is interspersed with other cultural domains calls out for a reexamination of the nature of kinship (Yanagisako 1978). This conversation with Schneider by feminist scholarship and science studies has brought in

Kathey-Lee-Galvin expands on Schneider's framework and evolves two new orders, "Order of Sharing" and "Order of Ratification" (2001: 119). Order of sharing corresponds to Schneider's Order of Nature but is flexible to accommodate both biogenetic substances and substances of nurturing, like food. Order of Ratification, on the other hand, has much more width compared to Order of Law in the sense that it incorporates both implicit and explicit social conventions (ibid.).

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important questions for parenthood, blood ties, and genealogy. It has prepared the ground for not only the next generation of anthropologists to engage in kinship studies but has also broadened the spectrum of kinship studies to include others.

Doing kinship: Human Agency in Action

In this discourse, the notion of choice and agency have been extended to realms which were earlier thought to be preset, inevitable, unchanging and out of human intercession. The infertility clinics and the human genome projects become the sites where active human agency is in practice. In handling and fiddling with biological facts, they formulate and reconceptualize procreation beliefs and notions of parenthood (Franklin 1995a). It is in these sites that one encounters explicit mechanisms in place through which old relations are contested, erased and relations are created anew. The explicit handling of social and cultural categories in this arena to define parenthood and assist in the process of making parents gives us a lens to understand human agency. This is because though at times shared substance (biogenetic) is taken to create a special link but in a different context the same biogenetic substance is played down upon and is delegated to the backstage (Thompson 2001). Such grounding of kinship on genetic /gestation /social categories also provides new avenues on which notions of paternity, inheritance, and descent get crafted. Procreation thus becomes a domain in which choice becomes possible and in this way child becomes “the embodiment of the act of choice” (Strathern 1992b: 34) and parents “customers respond[ing] to a market” (ibid.: 35) and “enterprising Kinship” (ibid.: 31).

In this analysis, person or personhood and agency also evolve as an analytical construct to understand ties of relatedness (Strathern 1991). Like the concept of substance and biology, person as a construct is culturally specific. In the Euro-American construct the evolving of personhood is rooted in her/his individuality hence the child though born of parents is uniquely distinct from them (Strathern 1991, 1992a & b). Individuality is the essence of personhood and person, in turn, means “naturally entire and free standing entity” (1991:582) in relation to the abstract environment or society. In the Euro-
American folk model, then person as a category is not inherently relational; hence, they think of “individual persons as relating not to other persons but to society as such” (ibid.). The contrast between individuality and relationally however, should not be taken in absolute terms but what needs to be acknowledged is that babies, bodies and person are all constructed through social actions (Conklin and Morgan 1996). Dealing with the analytical construct of personhood thus thrusts the human or “other being” as an “agent”, “the author of action purposively directed toward a goal” (Harris 1989:602). However, Strathern distinguishes between person and an agent. The person is not a preexisting entity but an object in regard to others and an objectification of relations that constitute her. The agent is one who acts with those relations as the reference point, “with another in mind” and who is revealed through her actions (Strathern 1988: 272-4). Thus the notion of human agency is not individual but a social action interspersed with social relations. In this representation an individual becomes an agent both by her/his social positionality i.e. identity bestowed by the social facts along with those provided by facts of biology.

> Mitigating the Knowledge Base

Facts of biology then do not just emanate special category of relatedness called kinship ties, but also the ownership of an exclusively specific form of knowledge which bestows them the authority and “particular access to truth” (Franklin 1997: 208). Scientific knowledge thus influences Euro-American culture by telling English women/men ‘who they are’ and defining their identity, individuality and relationality in terms of genetic information and ancestry (Strathern 1992 b). In this schema, then, with intervention in the biological realm the social understanding of kinship will also change. It is here that Strathern reiterates Schneider saying that not only kinship but also knowledge gets mitigated.

Technological intervention has drawn the attention from such wide spectrum because it is in this site that nature and technology become mutual substitute for each other and this transformability of nature and technology gives rise to a new knowledge base. In this
kinship becomes the catalogue through which knowledge, identity, paternity, ownership and new forms of property emerge. However, such knowledge of bodies, relationships, kinship, and connectivity are all intermediated by individual positionality.

In this sense all knowledge generated and identity produced are neither self-reliant nor permanent; rather these are situated and fluid, including the so-called immutable biological facts. In this age of NRGTs, the notion of inheritance changes as the knowledge of passing of one's substance assumes new meaning becoming explicit, apparent and drawing from different order of things and merging them in a complex way (Strathern 1992a). As procreation is delinked from sexual intercourse and from transmission of bodily substance, new forms of knowledge about identity and meaning of kinship concepts emerge. However, biology does not craft identity at an “ontological” level as one must distinguish between “the body itself” and a “discourse on the body” (Haraway 1997: 217); and as body is distinct and separate from biology, so is kinship. This singling out of certain biological factors over others and entrusting them with the power to translate themselves in a particular form of knowledge about kin relations, identity and inheritance is based on the particular socio-cultural locale at a particular point in time. This points towards specificity of knowledge practice and its situatedness (Franklin 2001b). The process of denaturalization and developing of a contextual knowledge base is the common theme on which both Strathern and Haraway worked and which makes Franklin observe,

＞Kinship: A Hybrid Institution

Naturalization of kinship within a reproductive model thus creates kinship as a hybrid institution connecting nature and culture for a specific community of people, namely, the Euro-American (Strathern 1992b). This is because, though technologies claim to unravel a new social dimension to parenthood, they are rooted in the basic assumption of kinship
being based on biological determinants. Kinship thus emerges as a hybrid framework by “bringing ideas from different domains together” (1992b: 3). This becomes feasible through technologization and commodification of a realm, which was thought to be both remote and secured as well as devoid of human contact. In order to understand hybrid, as an assortment of incongruent entities in which apparent binary opposites are bound together or severed without hierarchizing or prioritizing one component over the other, network41, becomes an important conceptual tool (Strathern 1996). Thus in the ordering of social life often amalgam is made between society and technology, culture and nature, human and non-human (Latour 1993, cited in Strathern 1996). In the era of technological assistance in reproduction such amalgam often becomes explicit and visible in the form of “non-human materials modified by human ingenuity, or human disposition molded by tools” (Strathern 1996: 522).

This is very much visible in case of homogeneous network where all those who belong to a network, in the conventional sense of the term, claim to have certain rights, obligation and ownership. Thus, a group of scientists who become identified for a scientific breakthrough has an onus on the invention made and certain rights and obligation derived out of it. But at the same time this is true that such a network also takes on the meaning of creating a hybrid in the sense that a scientific intervention in the realm of nature collapses nature and culture and fuses their otherwise defined boundaries. In the case of heterogeneous network, Strathern brings in the case of Moore litigation where the man who claimed property rights for cells developed from his tissue lost the legal battle. The legal judgment acknowledged the human ingenuity in the production of knowledge and granted patent rights to scientists. But, it questioned Moore’s intention to make profit from the commodification of his own body parts. In this battle, because of the human ingenuity, the cells assumed the status of intellectual property, over and above being part

41 Here, Strathern refers to network both in the sense of network as in “network analysis” (Strathern 1996: 524) theory and network as in “actor-network” (ibid.) theory. While the former refers to “network as string of obligations, a chain of colleagues, a history of cooperation...sustained by continuities of identity” (1996: 524); the latter refers to networks as “socially expanded hybrids” (Strathern 1996: 523). The latter takes on Latour’s (1993, cited in Strathern 1996) notion of network where “disparate elements [are] summated in an artefact” (Strathern 1996: 525).
of a person’s body. Hence the person’s body parts are no more his but is owned and controlled by someone else (Strathern 1996). As,

\[T\]he hybrid object, the modified cell, gathered a network into itself; that is, it condensed into a single item diverse elements from technology, science and society, enumerated together as an invention and available for ownership as property (1996: 523).

The network however is subjected to a particular space and time frame. They are measured by how and till what length a network is preserved or broken, guided by multiple socio-cultural factors at play. Hence, such formation of links and development of network are culturally specific and time bound based on the notion of relatedness and they also “truncate themselves through various constructs that carry them” (Edwards and Strathern 2000: 162). The ways in which relationship is made and unmade, kins are created and severed, connected and disconnected are a hybrid of different substances and also of claims, obligation, rights, and belonging through which it is mediated.

Hybridity also becomes the focal point of Haraway to look at the space of natural as a cultural practice. For Haraway, “science is culture in an unprecedented sense. From advertising to multinationals to lineages of professional patronage, science is irrevocably bound up in a wider cultural milieu, and likewise, no one in late-twentieth century technoscientific culture is immune to its interpolations” (Franklin 1995b: 172). Both Haraway and Strathern then portray “cultural hermeneutics of knowledge practices that foregrounds the constitutive role of metaphor, analogy, classification, narrative and genealogy in the production of natural facts” (Franklin 1995b: 172-3).

\[\text{Kinship as a Catalogue: A Shift from Type to Brand}\]

The category of kinship thus runs parallel to that of gender – because both these categories create ‘types and kinds’ of relations and identity. “Establishing identities” is “kinship work in action” as kinship is about a “kind of membership” (Haraway 1997: 67). In the context of NRGTs and naturalization of kinship, it is possible to develop an
analogy with transgenic animals, such as Oncomouse™ created by humans (Haraway 1997) ‘after nature’ (Strathern 1992b). As,

*The transuranic elements, transgenic creatures, which carry the genes from unrelated organisms, simultaneously fit into well-established taxonomic and evolutionary discourses and also blast widely understood senses of cultural limit. What was distant and unrelated becomes intimate. By the 1990s genes are us and we seem to include some curious family member (Haraway 1997: 56).*

The kinship relations that emerge are of “unnatural kinds” (Franklin 2001b: 313). While relation to transgenic creature might seem to be a part of science fiction, these “unnatural kinds” of relation are naturalized in the everyday practices of infertility clinics⁴². This is exemplified by Franklin (1995a) through the recipient couples who claim to develop relationships with the cryopreserved embryo suspended in liquid nitrogen as the potential child. This relatedness can be mind boggling in terms of its *newness*. However, the conceptualization of such a relationship by the couple is based on their assumption of shared genetic substance being the sole grounding factor of being related. The embryo in this debate and dispute emerges as a kinship identity (Franklin 1995a) by fulfilling existing criteria of being a kin. But at the same time embryo is also markedly different from human due to its microscopic existence, habit and habitat. The embryo has become the linking factor between science and nature with its status dwindling between scientific research material, quasi-citizen and potential person (Franklin 1995a). Thus embryo as a hybrid entity ridicules the power inherent in naturalized connection.

With the notion of hybridity and human agency a sharp shift is taking place in kinship from “kind to brand” as part of the larger social order (Haraway 1997: 65-66). Both kinship and gender which used to function to create types and kinds is in the process of producing brands through commercialization of life and body parts. Branding produces “particular descent lines or species of products, linked in multigenerational lineage and family resemblance” (Franklin 2001b: 315) and involves question of inheritance and property rights. Idea of property leads to fierce debate regarding the ownership of body

⁴² For a detailed re-reading of Haraway and her concept of embryo as a cyborg entity see Sarah Franklin (2006c).
tissue and body parts and of body products like embryos. In this market economy, who has access to these new forms of property – "biowealth" (Haraway 1997: 98) - between commissioning couple, donors and medical establishments become a highly contested field to understand both kin and market relations.

The Thesis on Commodification of Body

The thesis of commodification\(^43\) of human body and body parts is another important arena in the context of present theorization. The human body is emerging as a commodity\(^44\) (Awaya 1999, Williams-Jones 1999) in multiple sites. Biomedicine and biotechnology are the foremost as they have created new technologies to fragment body parts, given it an existence outside human body, made it useful resource for variety of purposes and allowed it to be exchanged for compensation or commercial transaction. As, Sharp (2000: 298) points out that biomedicine has “quickly fragmented [the body] and transformed [it] into scientific work projects”. Human organs tissues and cells are widely used for transplants, medical research, biotechnology and drug manufacturing. The recognition of new types of “separable, exchangeable and reincorporable” (Seale et al 2006: 1) implies that the body is a form of “merchandise”.

This is because in this “millennial capitalism (Comaroff and Comaroff 2000: 293), “[e]verything has to be paid for and everything has its price” (Taussig 1977:139). The seduction of capitalism to earn easy money from organ trade, gambling, fortune telling and the like are the modus operandi of “occult economies” (Comaroff and Comaroff 2000: 312) and “millennial capitalism of the moment”,

\[
[P]resents \textit{itself as a gospel of salvation; [as] a capitalism that, if rightly \textit{harnessed}, is invested with the capacity wholly to transform the universe}
\]

\(^43\) The commodification thesis has its own sets of limitations for e.g. not all forms of exchange of human tissue occur in commercial context.

\(^44\) This is not to say bodies are utilized and commodified only in the contemporary times. Throughout history bodies have been utilized in various ways for e.g., as food i.e., cannibalism (for further discussion see Awaya 1999) and also commodified in a number of cases for e.g. slavery or sex-work (for further discussion see Sharp 2000).
of the marginalized and disempowered (Comaroff and Comaroff 2000: 292).

According to Marx (1867, reprinted 1990) an object becomes a commodity when it acquires a use value and is then subjected to commercial transaction. Human body parts and reproductive substance are firstly to be objectified and reified before they are commodified. Subsequently the bodies and organs become fetishized objects (Sharp 2001) as the donor is dehumanized and reduced to the body part/substance that she/he will part with. Once objectified, fetishized and reified the body substance assumes independent “autonomous powers” (Taussig 1977: 143) beyond the person from whom it emanates and “commodities, like persons, [assume] social lives” (Appadurai 1986:3). In this schema “capital appears to have an innate property of self expansion...[and assumes the role of] the universal equivalent and mediator” (Taussig 1977:139). This process of reductionism, objectification and commodification of body (Scheper-Huges 2000) raises important theoretical question as to who under what circumstances has the right to part with his or her body/ body parts/ tissue/ cells. William James has asked “Are they simply ours, or are they us” (as quoted in Belk 1990:139, cited in Sharp 1995: 362). If the onus lies with the donor can we regard body as a resource or a property to be made available in the market to earn money?

John Locke argues that principles of autonomy provide a basis for ownership of body. The proponents of this theory operate from a utilitarian and neo-liberal principal (see Daar 1989) which undermines human dignity and looks at body as individual’s property45 and its commodification as based on individual choice. The criticism of commodification springs from the conception of dignity of the human body, which is a prominent tenet in Kantian46 theorization. According to Kant,

In the kingdom of end everything has either a price or a dignity. Whatever has a price can be replaced by something else as its equivalent; on the other hand, whatever is above all price, and therefore admits of no equivalent has a dignity

45 For further details and review of literature on body as property, see Rendtorff (2001).
46 Kantian objection to commodification based on the “The Argument from Worth” and “The Argument from Contradiction” has been criticized by scholars who uphold commercial system of organ procurement (Taylor 2006).

The idea that is put forth is: there are limits to what can be commodified. Bringing the priceless to the transactions of market economy is to degrade the dignity and integrity of personhood. There are three moral concerns on commercialization (Ketchum 1989:118):

a. The Kantian argument to trade in people and body parts is objectionable as human beings are objectified and can be bought, sold, and rented degrading their moral significance; b. the fact that intimate private act is being dragged to the public realm of commerce and economy of the hustle and bustle of market; c. the attempt to protect the surrogate and the mother-child relationship and the recipient from the coerciveness of commercial market transactions (Ketchum 1989:118).

This is leading to the “growing divide” between the social and scientific understanding of the body (Andrews and Nelkin,1998: 53). This contradiction arises because in “modern capitalist culture the body acquires a dualistic phenomenology as both a thing and my being, body and soul... it [thus] oscillates between my property and my being” (Taussig 1980: 4). This dualism of body and self facilitates depersonalization and dehumanization (Sharp 2000). Further, the absolute notion of choice that forms the bedrock for arguing in favour of commodification is problematic. As, Schep-Hughes points out

Bio-ethical arguments [about the right to sell are] based on Euro-American notions of contract and individual ‘choice’... [but] social and economic contexts that make the ‘choice’ to sell a kidney in an urban slum of Calcutta or in a Brazilian favela is anything but a ‘free’ and autonomous one (Schep-Hughes 2000:12).

The Jargon of Gift-Giving

In order to ease out the tension between the body as a self and a thing in the commodification discourse, the jargon of gift giving plays an dominant role in the context of NRGTs. In the site of modern technocentric, biomedicine the language of gift exchange makes an attempt to obscure capitalist forms of commodification (Sharp 2000). The concept of gift becomes an “alternative to a pragmatic utilitarian logic on the one hand, and on the other hand the economic logic of the gift implies principles separating
the body from the intimacy of the person" (Rendtorff 2001: 58). This is because, gift giving "fosters social cohesion and social exchange" (Batten 1990:90, cited in Sharp 1995:364). Mauss (1954, reprinted 1974) has argued that exchange goods rather than being just a thing are a microcosm of diverse meanings depending on the particular sociopolitical context in which it is exchanged. As such, they emanate social attributes and are symbols of power and hierarchy. In this Mauss’s (1954, reprinted 1974) position seems close to Marx (1867, reprinted 1990) in that they both accept "the social life of things" (Appadurai 1986). According to Mauss (1954, reprinted 1974), gifts which are supposed to be given voluntarily, are actually obligatory (Mauss 1954, reprinted 1974:1). There is a power inherent in gift which assures that gift must be given back. There are three obligations, which make up the essence of gift: the obligation to give, to receive and reciprocate 47.

In case of egg/sperm donation and renting of womb, gifting is not simple as it involves at the same time both a person and thing. Hence there exist a “tyranny of gift” (Fox and Swazey 1992, cited in Sharp 1995: 379). Here one can draw a parallel with Taussig’s understanding of debt as a fetishized commodity (1977). Just as debt is an amalgam of gift and capitalist economic principles, so is donation in case of NRGTs. To Strathern, terms like gift and donation, “evoke the charitable altruism of blood and organ donors; it also evokes the intimate altruism of transactions that typify personal relations outside market” (1991: 591). According to Strathern, donation in this sense gets conceptualized in two distinct ways: “on the one hand it may simply involve an act of bodily emission intended for an anonymous recipient; on the other hand it may involve a relationship between donors and recipients as partners in a single enterprise” (1991:591).

If we trace the usage of the metaphor of gift in third party conception we find that the root of such usage stems from adoption arrangements (Sterett 2002). Sterett argues that treating a child as a gift in adoption creates the image of the child having no history. In a similar endeavour and in order to create this ambivalence that the gametes belong to no one and are without history that the gift metaphor pervades the field of ARTs. If gifts  

47 To have an exhaustive understanding on critical theories of gift, see Karen Sykes (2005).
entail "enchainment" (Strathern 1988) then when one receives gametes, one would also receive a microcosm of history and potential relationship. But the model of gift in the ART circle does not only sideline the particularities of history but takes an active effort to obliterare them. Though Mauss (1954, reprinted 1974) stresses on reciprocity of gifts, Strathern (1988) has been instrumental in showing how gifts also create extrication and disconnection between persons by focusing on donation of sperm from one person to the other which does not necessarily link both the persons. The gift becomes apposite in this context as "the gesture is of course a nice dovetailing of — keeping consonant but separate — the twin ideas of what one owns (as property) and what is one's own (as person)" (Edwards and Strathern 2000: 159).

It is evident then NRGT does not concern itself only with 'new ways of making babies' but spans over a wider set of issues as it

"Form[s] part of a rich narrative field in which ideas about kinship, nature and culture are woven together in complex and historically dense ways (Hayden 1998; quoted in Franklin 2000:319)."

It proclaims that the work of making kinship is both visible and deliberate. This becomes all the more evident, as we witness, in the settings such as infertility clinics and genetic counselling sessions where women and men, along with the medical establishment and other technical and legal processes in place, are made to handle social and biological components of making kin (Lundin 2001, Åkesson 2001, Thompson 2001). Given the diverse, fluid multiple entities which can be the grounding factor of kinship depending on the context — it becomes imperative to learn and unlearn through which of these categories of kinship, ties are both created and severed. The mechanism through which such negotiations take place helps us to look at the question of agency and choice and also into the socio-cultural context, which affirms or negates choice. In doing kinship, then, relatedness gets defined not only through biogenetic substance but also through parameters like "who you like, with whom you find it easy to communicate, or socialize, or from who you can benefit the most" (Åkesson 2001: 129).
Re-looking at the process of naturalization as a symbolic cultural practice that creates knowledge system and identity formation (Strathern 1992a and 1992b); and revealing the cultural dimensions of scientific facts (Franklin 1995a&b, 2001b, Martin 1991) provides us with the necessary lens to look at *Engineering Family Values* also in a non-Western setting like India. In this framework notions of biology and substance do not remain specific to Euro-American construct, their fluidity, depth and breadth of connotation make them analytical categories to be used cross-culturally. It will help us to unearth the social identities (Franklin 1995a&b, Strathern 1992a&b, Thompson 2001, Edwards 1991) and social relationships as they are created and manipulated in the day-to-day experience and through engagement of common people with these technologies in the setting of West Bengal. It will help us to come to terms with the ever-expanding vocabulary and the profound impact that it has on the language of social relationships (Yoxen 1986) as it comes with the potential to do and undo existing social relationships. These contemporary theoretical debates on substance, biology, nature, personhood, hybridity, agency, choice, and network, commodification and gift become important constructs which provide us with the impetus to find out if infertility clinics in India have become the potential sites for such exploration. This has pushed us to unearth the *given* basis of kinship in West Bengal and the degree to which these are necessarily predicted on *biological facts*. It also asks for a critical look at the concept of gender and sex, which earlier had implied a base of universal biological sexual difference, specifically a male/ female difference in reproduction. This is because while these terms may in themselves seem quite unproblematic, precisely what they mean becomes ambiguous as new meanings add on and new interactions follow.

Taking a cue from all these theoretical strands the study of kinship in the infertility clinics of West Bengal will be carried out. However, we are also anxious not to bump into a catch-22 situation as we decide to look for engineering of family values in the field of assisted conception and pregnancy. This is because, what becomes evident in this theoretical discourse is that it is important to look beyond kinship as based on genealogy or biology even in the era when biology has come out in the open and has assumed dominance globally. There is a growing trepidation, as we embark to understand kinship
in West Bengal in the light of Assisted Reproductive Technologies, whether this exploration is based on our predetermined understanding of inherent relationship of biology and kinship. The rich theoretical heritage also cautions us about thrusting uncontrolled power into the hands of technological intervention to bring about change. It is also important to be aware that the potential of redefining cultural meaning of NRGTs might not be similar for those who have no vested interest in these technologies and do not face any intimate consequence of the same. With both the strength that the theoretical understanding of kinship provides us and the inherent apprehension and introspection, coupled with our knowledge of technological reproduction, we will embark in our quest to understand kinship in West Bengal. But in order to do so it becomes important first to understand the nuances of Bengali kinship keeping in mind that kinship is as much about theorizing as it is about doing (Schneider 1984).

III. Being ‘Related’ in Bengal

In order to have an adequate understanding of implications of ARTs on Bengali kinship it becomes a prerequisite to lay out what it means to be related in a Bengali setting. In so doing we will take primarily the major authoritative texts of Bengali kinship, namely, ‘Kinship in Bengali Culture’ by Ronald Inden and Ralph W. Nicholas (1977) and ‘Kinship and Ritual in Bengal’ by Lina Fruzzetti and Akos Ostor (1984) as our starting point since they are guided by Schneider’s dictum. As the authors of the former text state, “the approach we have taken to the category of kinship in Bengali culture is derived primarily from that of David Schneider in his analysis” (1977: xii). In a similar tone, the second text is claimed to grow “out of a concern with aspects of structuralism as developed in the work of Louis Dumont, and a concern with the domain of culture as explored in the studies of David Schneider” (1984:83). In doing so, while Inden and Nicholas, like Schneider, take in symbols as the domain through which making (and

48 This text, to my mind, also grows out as a response to the account of Bengali kinship by Inden and Nicholas, in particular, and to the ethnosociological work on caste and kinship, in general.
unmaking) of relationship are visible, for Fruzzetti and Ostor it is rituals which becomes the lens for understanding the categories of personhood and relationship. We will derive from both these texts what it means in Bengal to be related to someone, how and when such relations are formed and severed, what is the grounding factor for being a kin and notions of conception, pregnancy and body.

Understanding Bengali kinship through Monistic Categories

Kinship for Bengali Hindus is grounded on the cultural assumption that all beings are organized into 'jati', genera. A person is conceived as being born in a particular clan (kula), family (paribar) and sex (stri-jati and purusa-jati). Each genus is defined by its particular encoded substance where the substance and code are thought to be inseparable from one another. Thus the code of conduct (of a particular clan, family, or sex) is imbedded in the bodily substance which, when transmitted by a person of each genus, is inherited and absorbed by the other at birth in creating a relationship. In this cultural premise, thus, no distinction is made between an order of nature (defined by shared biogenetic substance in Schneider’s analysis) and an order of law (defined by code of conduct) (Inden and Nicholas 1977). In Bengali culture, then, there is a single order of being – an order that in western term is “both natural and moral, both material and spiritual” (1977: xiv). In this sense Bengali culture postulates a single “non dualistically conceived order of substances each of which possesses its own inherent code of conduct” (Inden and Nicholas 1977:86). In this exposition, the opposition between the substance and code is not only resolved but body, person, and encoded substance are also entrusted with the capability of being able to transform and mould from one to another.

49 The word symbol here refers to the Schneiderian definition where “something which stands for something else, where there is no necessary or intrinsic relationship between the symbol and that which it symbolizes”(1968, reprinted 1980:1).
50 In Hindu text and in everyday practice, Dharma is understood as 'morality' or within the actor as “code of conduct” (Marriott 1976a: 192) which is inherent in the category of being.
51 It is crucial that the same word substance has come to refer to “two explicitly opposed set of meanings” (Carsten 2001:36) in different contexts. Thus, while in America, substance in Schneider’s formulation referred to fixed biogenetic substance, in case of India the same term connotes the very transformability fluidity and malleability of both biological and non-biological essences. So, though substance and code are taken as essential features of Bengali kinship, what they come to mean in Bengal and the very way they are in relation to each other are significantly different.
with ease. Thus “both shared body and given body, as coded substances, are resolvable into a single coded substance, the body, containing a single code for conduct that enjoins love” (Inden and Nicholas 1977:86).

Defining “One’s Own People” in this Paradigm

In this framework as biogenetic substance is not opposed to non-bodily substance, relationship in Bengal is understood, to be derived from both bodily and non-bodily substances. Persons related by bodily substances are also believed to be related by non-bodily substances like food, land, nurturance, care, and affection. Land and food relate also those ‘attiya-sajan’, who are not related by bodily substance. Of these, food is the most general if not the most important. Attiya-sajan can be near or far. But “nijer attiya” must be a relative of attitude (code of conduct) and of a stable everlasting link usually conceptualized as blood (rakta) or marriage (biye). However, “relatives by relationship” (through attitude or sentiment) are also specific and close. Even though they may not be own in the sense of shared blood (Fruzzetti et al 1984:86-7).

This becomes quite clear, in the way Bengalis respond when asked to provide definitions of “ones own people”:

[T]hey were persons related by blood (rakta) or by the same body (eka-sarira, sapinda). At the same time they also said ‘that some persons not related by blood are also ones own people’: persons related by marriage, by living together in the same house, neighbourhood or village; by being members of the same school, class; by working together in the same office; by taking instruction from the same guru, and so forth (Inden & Nicholas 1977:1).

Attiya then is a person with whom one “shares something” (Fruzzetti et al 1984:85). Bengalis classify their own people not only as attiya - sajan and jati - kutumba but also as persons of a particular solidarity unit. They are referred to by terms such as kula and paribara. The term “kula refers to a set of one’s own people, taking a seed male or ancestral male and not ego as its referent” (Inden & Nicholas 1977:4). Persons who belong to the same gotra, which can include people from different castes, are referred to as sagotra. “A gotra is a clan like unit defined not by shared bodily substance but by a shared name, being that of an original Brahmin priest - preceptor” (Inden and Nicholas
1977:50). The term ‘vamsa’/ bangsa’ refers to the particular bodily substance of male (semen). In its most common usage, bangsa is a synonym for kula. In its restricted sense it means children or offspring, particularly, male. The term ‘paribara’ refers to a set of one’s own people taking a living, rather than a dead, referent. The first and foremost in this set is the man’s wife and often, in daily communication, ‘paribara’ refers to wife. However, wife alone is not regarded as the man’s minimal family. In order to perpetuate the kula a man should be a father and genitor (janaka) and his wife a mother and genetrix (janani) of at least a son. His family may also include their other sons and daughters who are brothers and sisters to each other. This set of eight relationships is regarded as encompassing the closest bodily relationship among one’s own people (Inden and Nicholas 1977).

The term jati on the other hand refers to the terms eka-deha (same–body), eka-sarira (same–soul) and most importantly sapinda, thus making no concrete distinction between body and soul. The authority of jati samaj is taken into consideration in the questions of property or morality of the individuals (Klass 1972). It is also important to highlight that sapinda refers both to the body and to the lump of food offered to an ancestor. It includes those who have the capacity to share in the same food offerings. In other words two-shared substance becomes equally important in defining sapinda - both the human bodily substance and food52. The most famous definition of the sapinda relationship53 occurs in Vijnanesvara’s Mitraksara54.

52 In the Kathasaritsagara, a collection of stories written in the 11th century AD, the story of a king offering rice balls to his ancestor is an exemplification of the criteria of being related. When he was about to give away the offering in the river, three hands came up to receive it – those belonging to a farmer, a priest and a warrior. The oracles revealed that “the farmer is the man who married your mother, the priest is the man who made your mother pregnant and the warrior is the man who took care of you”. The king is advised to give the offering to the farmer as he is being described as the ‘real’ father (Pattanaik in www.drmalpani.com/infertility-hindu-mythology.htm.). It is an important case where we see Schneider’s order of law having a stronger hold in defining paternity rather than biogenetic substance or for that matter nurturance.

53 “The shared body relationship comes about by virtue of connection with portions of the same body. Thus, by virtue of connection with portions of the father’s body, the son comes to have a shared body relationship with the father and through the father with the set of those beginning with the father’s father as well, because of the connection with portions of his body. Similarly, by virtue of connection with portions of mother’s body he comes to have shared body relationship with the mother and through the mother with the set of those beginning with mother’s father” (quoted in Inden and Nicholas1977: 13).

54 It is a commentary written around AD 1100 in the codebook of Yajanavalkya. It was compiled by a school of sastris (scholars) between AD 100 and 300 (cited in Inden and Nicholas1977).
This definition encompasses not only *jati* but also persons of the father and mother’s *kula* as well. More significant is the inclusion of a man’s wife and ‘wives of his brothers’. Their inclusion in this set contrasts with the categorization of consanguines and affines in Euro-American culture (Inden and Nicholas 1977; Fruzzetti et al 1984). *Kutumbas*, according to Bengalis, “are persons not of their own family and clan but of other families and clan who are related by marriage” (Inden and Nicholas 1977:15). Thus it is a way of saying that *kutumbas* are those with whom ‘no blood is shared’. It may appear that the *kutumba* class coincides with the American class of relative by marriage or ‘in law’. However, there is no doubt that the persons included in this set do coincide with that of affines in anthropological understanding but the former also includes mother’s brother, mother’s father, married sisters and daughters. However, quite interestingly, husband’s father, mother or brothers are never part of this set of relatives called *kutumba*. Moreover, a man’s *kutum* becomes his children’s *attiya* in succeeding generation. The child is born out of a male line, carrying that male line, sharing the parents. Thus though the mother shares her own blood with her father, but the blood of her children is that of her husband. Thus, one’s father’s *kutum* are ones ‘rakta-attiya’. In this way one does share blood with one’s ‘mama’ (mother’s brother) even though the latter is outside one’s *jati*. Thus, in addition to the *jati*, the blood relatives on one’s mother’s side are also excluded from marriage.

Blood is then a symbol of referring to a substance as a vehicle for the expression of maleness, male-line, gotra, *matrishakti*, and male-female complementarity. It would be however easy to talk of blood as mere substance and then go on to substantivize ‘line’ and male blood. This is far from the case. Each of the constructs is separate and each is defined in different terms. This is because blood relationships (*raktasamparka*) remain where gotra, bangsa, and satpurus relationship cease. Thus the core substance of kinship in local perception is blood and the major constituent of blood is food. To Fruzzetti and Ostor:

*The cultural construction of the person and the indigenous theories of conception act to constitute hierarchy as well as equality within and without the units of action. Purity and quality of blood (in kindred and line) oppose units of*
equivalence (of greater or lesser inclusiveness) to each other in a system of hierarchy (caste, lines, kindred). The units of hierarchical action are created and defined in relation to each other through indigenous principles entering into the construction of the person, blood, marriage and conception yielding units of equivalence in a hierarchically ordered whole (1984:11).

The Bengali notion of bangsa (line) and rakta (blood) then has to be differentiated from universal anthropological notions of lineage and genealogy. This is because Bengalis have several notions on what a relative is. They distinguish between blood-relatives, marriage-relatives, and relationship-relatives (samparke attiya), on the one hand, and the relatives in the male-line and female-line, on the other. It is quite evident that several constructs together may define a person and that each construct may cut a different circle of relatives around a person. All of these appear paradoxical only in the anthropological models of genealogy. Consanguinity and affinity oppose each other as relationships through blood and marriage in the strict sense. Moreover, fictive kin is kept outside both the realms and is taken as less important than that of biological ones. There is no strict opposition in the Bengali case. In this schema of relatedness, Bengalis consider certain people as attiya who are neither related by blood or marriage. This is because the residual set of ‘ones own people’ is indefinite and open-ended, even including people from different castes. However, to describe any of the persons of the attiya sajan class as fictive kin is to go against the ideology of Bengali kinship.

Using anthropological terminology, it can be said that consanguine, affines and fictive kin belong to the encompassing class of kinsmen or relatives. The fact that anthropological vocabulary falls short of comprehending the essence of what makes a relative in Bengal is because though marriage and blood makes relatives they are themselves cultural categories. To Klass, defining kinship in Bengal as “relationship by

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53 The personal experience in Bengal more than confirms this view. As each of us is either a younger/ elder sister (bon/didi), mother’s sister (masi), father’s sister (pisi) and so on to innumerable persons, in most modern part of Calcutta even when such relationship cannot be traced neither through genealogies nor are permanent but are used even as temporary references for stranger or casual acquaintances.

56 However, because of the basic dualistic assumption rooted in anthropological theorizing, Indian kinship has come to mean either based on descent (birth) or marriage. Thus kinship system in north India (of which Bengali kinship is a part) has come to mean: “a bounded sphere which is closely structured by certain well known characteristics: patrilineality and patrilocality, the centrality of alliance in perpetuation of patrilineal descent groups, status distinction between wife-takers and wife-givers and village exogamy” (Lambert 2000:73).
blood/ and or marriage would be much too all – inclusive ...[as there are] many
gradations and varieties of kin...[and] with each category he has obligations” (1966:
959). Bengali notion of relationship, among persons, can at best be said as sharing
something that is eternal, and yet though all men have it, not all men are attiya (Fruzzetti
and Ostor 1984).

Gender Dimension of Bengali Kinship

In this categorization what gets highlighted is the gendered aspect of kinship. With the
marriage of the woman, she becomes assimilated in her husband’s family and her identity
gets crafted through the husband’s gotra and kula. In Bengal thus, a woman does not
have a gotra identification of her own; before marriage, she is of her father’s gotra and
after marriage, her gotra changes to that of her husband’s. Marriage then not only
changes the residence for Bengali girls but her clan and lineage affiliations change as
well (Davis 1976). Bangsa (line) and gotra are passed on through rakta (blood) in the
male but women in marriage acquire them anew. Bangsa and gotra are not genealogically
based on blood, rather they are cultural constructs. Men do not change their gotra but
women do. Women do not establish bangsas but men do. Marriage in Bengal becomes
one of the significant samskaras, not only as an institution having the potential to give
birth to a male offspring but also as it involves the metaphor of rebirth for both husband
and wife. It is through marriage that a man’s body becomes complete. At the same time,
his wife is reborn with him, as his half- body (Inden and Nicholas 1977). This symbolic
action thus creates a new family, by uniting two unrelated and separated bodies. By
unrelated it means that the husband and wife must not be from same kula and hence
should not have shared substance between them. However, they are not unrelated in any
absolute sense. On the contrary, at the level of caste, shared body must relate them and at
that level there must be sharing of encoded substance. Otherwise, the woman’s body and
code for conduct will not be transformed into that of her husband. As a result, they will
not be able to reproduce children of the clan and caste. Thus, it is only when a man
marries, that his line is established. As Manu, the lawgiver, wrote ‘to be mothers, women
were created and to be fathers, men’ (quoted in Gupta 2000:95).
The groom is referred to as patra, meaning vessel and the bride is patri, meaning one who embeds the vessel (Fruzzetti et al. 1984). Gaya halud or gatra-haridra, the besmearing of the bodies of bride and groom with thick paste of turmeric and oil (Bonnerjea 1930, Mitra 1946) becomes a significant ritual to understand sharing of substance. The paste is first used by the groom and the remainder is sent off to the girl’s place to be smeared/anointed on the girl’s body. This initiates the process of sharing of substance, which then will culminate into sharing of body and body fluids. The ceremony performed after the bride reaches the groom’s place called bou bhat, is also part of the initiation ceremony where the bride, by serving cooked rice (Mitra 1946) to the family members, becomes part of the husband’s family. Thus, sharing of food in general and rice in particular, starts off the assimilation of the girl in the husband’s family. It is thus, through the marriage ceremony that the bride takes in substance both from her husband’s body and his family.

The reverse, that is the man getting assimilated in the wife’s family in the same way, does not materialize. It is only that the husband becomes the wife’s father’s attiya as the “linking relative” (Fruzzetti et al. 1984:90). It is here that we find that the apparent affine class of relatives in anthropological language does not coincide with the Bengali notion of kutumb. This is because the relationship with jamai (daughter’s husband) and bouma (son’s wife) are crafted as intrinsically different. This is where the uniqueness of Bengali marriage stems in where the jamai becomes his father-in-law’s son but all his relatives are classified as kutumb (Fruzzetti and Ostor 1984). The defining feature of kutumb is not marriage alone. Though husband’s brother, sister, brother’s wife is all attiya to the woman, she also retains her attiya relationship with her own brother, sister and even with her brother’s wife (boudi). The feature that defines kutumba relation is “non-reciprocal exchange...of the body of daughter” from the father’s to the husband’s clan (Inden and Nicholas 1977:16). However, the daughter’s body is not totally severed from but is still

57 The earliest memoir written by a Bengali lady, Rassundari Devi, compares her mental state at the time of departure to her marital home to that of a sacrificial goat quaking with fear just before slaughter (Jana 1981; cited Raychaudhuri 2000). But after three months in her in-laws house when her mother-in-law took her in her lap she claims to have found a new mother. She writes, “the bark of a tree from a far away place grew into the body of another plant. How strange, how mysterious are the ways [of God]” (Jana 1981; cited Raychaudhuri 2000). This narration becomes self-explanatory for both painful loosening of ties with the natal home on one hand and assimilation in the husband’s home on the other. The metaphor of being born again clearly becomes a pointer of how birth imagery pervades Bengali notion of relatedness.
shared by the persons of the father’s clan. Thus, sharing and gift giving can be said to be the features that distinguish the *jati* and *kutumba* classes from each other. Unlike consanguinity or affinity, it implies a “relationship that is, translated into Schneider’s American category, simultaneously one of natural substance – the body – and of code of conduct – one enjoining sharing or gift giving” (Inden and Nicholas 1977:17).

In case of male, the relational ties, once made, are more or less sustained throughout their lifetime; in case of women, the relational ties are made, unmade and remade much more frequently. Though both men and women’s bodies are open and permeable, women are seen to be more resilient as they are perceived as more fluid and their bodies as more open (*khola*) (Lamb 1997). This is because women go through the process of menstruation, sexuality, marriage and childbirth and in all these processes substance goes out of women’s body in order to build relationships.

**Personhood in Bengali Kinship**

Since substance enjoins code, consanguinity, affinity and fictive kin are seen not to be in opposition to each other. Rather they form a continuum in which overlapping of categories takes place. As such, the person in Bengal is taken as relational. It is only while giving away part of her/his encoded substance to the other person who absorbs it that a relationship is in place and a person comes to exist. This conceptualization of personhood in Bengal, has its roots in the otherwise structural understanding of Dumont (1980) and ethnosociological understanding of caste. Dumont (1980) stressed that the perception of the autonomous individual is not in accordance with the Hindu society and observed that the person in India is restrained by hierarchical categories in the place where she/he operates. While Dumont stressed the suppression of the individual in

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58 That is, altered code results in altered substance.
59 Unlike Dumont’s latter formulations, where dualistic categories and binary opposition pervade his understanding of Hindu society; Dumont (1962, cited in Marriott 1976a) in his earlier writings notes that in the monistic philosophy persons as actors are encompassed within the holistic collectives of family, caste, village and society and their identities can be transferred through transfer of gifts or food.
Indian society, to Marriott it is the dividuality of person (Marriott 1976a) that underlies ordering of relationship in the South Asian context.

In Marriott’s (1976a and 1976b) conceptualization, the Indian person is dividual, fluid, unbound and partly divisible in nature. In contrast the western person is an individual – autonomous and self contained. Marriott derives the notions of personhood and transaction from Schneider’s conceptualization. However, in doing so, he sketches a reality which is opposed to the Euro-American notion of connectedness. In this conceptualization substance and code, far from being derived from two different orders, is one and inseparable giving rise to “systematic monism” (1976b: 109). In this coded substance are not only inseparable but they are bestowed with a fluidity which makes them pliable. This gets exemplified by the use of the “substance-code” or “code-substance” as hyphenated words (Marriott 1976b: 109) signifying the fluidity with which one can transform into the other. It is through various actions like marriage, sex, sharing of food, water, and land that a person gives a part of his/her substance to the other who absorbs and incorporates it. The transfer is not only from one person to the other but a new substance is acquired, both from the physical and moral properties of the persons, as well as those that are given and shared. According to him, the interchangeability of actor and action and transferability of one category to the other is the essence on which Hindu kinship, in general, and Bengali Hindu kinship system, in particular, is premised upon (Marriott 1976a).

Cultural Story of Conception and Transmission

It is through symbols of sarira (body), sukra/bija (semen/seed), garbha /kshetra (womb/field), and rituals that these two texts visualize the cultural story of conception. The body is taken to be the central symbol of kinship in Bengali culture (Inden and Nicholas 1977). The body however is conceptualized not to be static. It is rather continuously transformed through out life by a series of symbolic actions and rituals (samsakaras). Recalling Schneider, Inden and Nicholas write:
Marriage: The Samskara and Institution Geared towards Childbirth

Marriage is the fundamental institution in the Hindu normative order as it is through marriage that a family perpetuates. The institution of marriage in the Hindu culture is geared towards one end i.e. "putrarthe kriyate bharya" – a man takes a wife to beget sons\textsuperscript{61} (Bonnerjea 1930). According to the Hindu religious belief, the requirement of a son is primarily felt because the son can offer spiritual salvation. In the Bhagawat-Gita it is said that the “extinction of a family causes the destruction of the family religion, and when the religion is destroyed irreligion spreads in the remainder of the family” (fifth edition by Abinaschandra Mukhopadhyay\textsuperscript{1319} cited in Bonnerjea 1930: 9). The importance of having an offspring, and that too a male one, pervades Hindu scriptures and text\textsuperscript{62}. The very word putra, which means son, connotes “one who saves from the hell called put” (ibid.: 3). The most common reference to marriage is in terms of a field and seed in the field\textsuperscript{63} as it is through marriage that new life germinates (Inden & Nicholas 1977; Fruzzetti et al. 1983, 1984; Dube 1986)\textsuperscript{64}. The seed and the field as recurrent symbols occur in the Mahabharata in contexts where husbands are incapable of

\textsuperscript{60} Drawing from Schneider, the authors replace the central symbolic act in America i.e. sexual intercourse, with birth symbolism of Bengal. However, they infer that \[\text{In}\] Bengali Hindu terms ...a ‘natural’ act such as giving birth, is at the same time a ‘moral’ act properly accompanied by actions symbolizing both the shared body relationship and code of conduct it is thought to generate (Inden and Nicholas 1977:36).

\textsuperscript{61} This is a glaring fact as of the twelve purificatory rites or samskaras of Grhyasutras or collection of domestic rule, four are directly or indirectly related to marriage and child birth – Garbhadhana or impregnation, jata-karmana or birth ceremony, Pumsavana or male production and Vivaha or marriage (Bonnerjea 1930).

\textsuperscript{62} This is cited in Manusmriti, the most authoritative text on rightful conduct and the earthwork of the Hindu family system over the years (see Laws of Manu, vii. 3; cited in Bonnerjea 1930).

\textsuperscript{63} Dube views that this metaphorical usage is common all over northern, and central India and large part of western and southern India too (1986:22). This is reported to be equally true of Muslim villages in rural Bangladesh (Usyki1a 1998) and Muslims of Bengal too (Fruzzetti et al. 1984).

\textsuperscript{64} Bengali conceptualization of this particular metaphor has its roots in Vedic literature, in the law books and, more profoundly, in the great epic, the Mahabharata. The most important among the law books, Manusmriti, uses it as the basis for determining the status of the offspring of mixed unions and for assessing the propriety of types of mixed union (see Dube 1986).
continuing the line\textsuperscript{65}. In these situations a substitute for the husband to contribute his seed for the sake of obtaining a progeny is normal\textsuperscript{66}. Given this pronatalist paradigm, men who cannot fulfill their biological obligation for a physical problem is referred to in derogatory terms as napunsaka (non-man) or kliba\textsuperscript{67} (like a thing) (Pattanaik in www.drmalpani.com/infertility-hindu-mythology.htm). In case of absence of biological child though adopted sons are seen to serve the purpose of one’s own son they are not taken as satisfactory, showing that there are instances where Bengalis did a differentiation between biological and social and chose one over the other. As the Bengali proverb runs,

\begin{quote}
A very dark Brahman, a fair Sudra, a short Mohammedan, a son-in-law who remains permanently in the father-in-law’s house and an adopted son are equally bad.
\end{quote}

\textbf{Understanding Procreation}

Procreation in Bengal is premised upon certain definitions of human body. The male (purusha) has the capacity to produce semen (sukra) – the seed. The distinctive feature of a human being as a female is her capacity to produce uterine blood in her womb (garbha) – the field. Both semen and uterine blood are the products of a series of physiological transformation. Food, especially rice (anna), when eaten, is transformed into digested food (rasa) and then into blood (rakta). Within a person’s body, blood turns into flesh (mamsa), flesh into fat (meda) and fat into marrow (majja) and subsequently into semen in a male person and uterine blood in a female. Semen\textsuperscript{68} is seen as the vehicle of strength,

\textsuperscript{65} One can easily find instances of the births of Pandu, Dhrithrashtra and Bidur from the sage Vyas when Vichitravrtya (one having different virility) died so that the line can be carried. This is an example of the practice which is called niyog. Among the Hindus, levirate was not practiced in the strict sense of the term for in case of “Niyoga, levir did not take his brother’s widow as his own but simply had intercourse with her” (J. Jolly, cited in Bonnerjea 1930: 5). It is also witnessed in the account of Pandu asking Kunti to conceive sons from some Brahman. At this request Kunti told him about the gift given to her by the sage Durvasa and five sons were conceived.

\textsuperscript{66} For further discussion see Irravati Karve (1953).

\textsuperscript{67} Manusmruti debarred such men from sacred rituals and inheritance (see Laws of Manu, cited in Bonnerjea 1930). The theme of infertility plays an important role in the Hindu epics, such as the Ramayana and the Mahabharata.

\textsuperscript{68} There is a wide belief among Bengali Hindus about the significance of semen as a reservoir of strength and hence there is a concern with the loss of it (Carstairs 1967, quoted in Nag 1972). It is also presumed that one can accumulate moral strength by conserving one’s semen. In the Mahabharata, it is said that the soul of the man is locked in the semen. Semen is the medium through which ancestors make their
mental agility, and sexual energy as well reproductive substance. Thus, semen and uterine blood are both highly concentrated blood and these are the human substances from which body is generated (Chakroborty 1923, cited in Inden & Nicholas 1977). This exemplifies the unification and constant diversification of the single element ‘rakta’, thereby highlighting the monistic conceptualization of substance-code. Blood, then, is seen as something more than the biogenetic substance. Blood being a metaphorical concept, also conjures up the body as having the inherent capacity to convert food into body fluid and one body fluid into another.

In intercourse (sangam) the husband’s seed is received and accepted by the wife in her womb. The sexual intercourse is only fleetingly referred\(^{69}\) (Inden and Nicholas 1977). But it is clearly understood to be essential for the production of offspring which, in turn, is the primary purpose of marriage. Particles from the body of the genitor (semen) are thought to mix with the particles in the body of the genetrix (uterine) blood to form an embryo in the stomach of the genetrix. The seed among other things, builds the bone structure, nerves and marrow of the child. The uterine blood, which comes from the womb (yoni), is regarded as the source of the “soft” (Inden and Nicholas 1977:52), unstructured part of the body, namely, skin, flesh and blood\(^{70}\). Even after birth, the mother increases the child’s blood and strengthens his bones by her milk\(^{71}\). In addition to blood, mother and father pass on various qualities (guna) to the offspring. The mother contributes matrisakti (Fruzzetti and Ostor 1984:109) to the offspring. The sakti, a combination of power, force, ability and effect, is shared by all the children. The

comeback to the world. The soul in semen is embedded in the womb. This conception of semen as the most powerful body fluid is also validated in case of Bengali Muslim population (Khan et al 2006).

\(^{69}\) Although sex does not feature as a sinful act in Hindu scripture and philosophy, what is suggested is a moderation in sex. It is suggested that man should indulge in sexual relation when his partner is in utmost desire for it, when she is in ritu, a few days after menstruation roughly corresponding to the ‘fertile’ days. Procreation thus becomes the legitimate reason behind sexual relation (Nag 1972).

\(^{70}\) The chapter on ‘sharirasthamam’ (embryology and anatomy) in Charaka Samhita contains a detailed description of the specific contribution of the two parents. For detailed discussion see Leela Dube (1986:35).

\(^{71}\) There is also a strong interrelationship between food taboos, religious observation and pregnancy. In certain sections of Bengal, it is believed that if the husband eats the female of any animal during his wife’s pregnancy, the child will be a girl; and if he eats any fruit growing conjointly at this time, the wife will give birth to twins (Bonnerjea 1930). Though there might be a decrease in such beliefs in recent times, as far as rituals are concerned, food taboos are still very much in place (Donner 2003). As both bodily and emotional substances flow from the mother to the child, along with the four-course meal, she is advised to “consume good word as well as good books” (Donner 2003:319).
mother's quality and the father's quality also determine, in combination, whether the offspring will be a male or a female. Thus, all human beings share female and male qualities; it is only the proportion of each substance which determines the sex of the offspring (Inden and Nicholas 1977; Fruzzetti et al. 1983). In the creation of the child, the mother compliments the father at every step.

A Critical Look

We have dealt with cultural constructs of relatedness in Bengali parlance in order to understand what is considered to be the grounding factor in making and unmaking relationship. In doing so, we have also clarified the cultural constructs of marriage, procreation and childbirth, as these are central categories to unravel kinship implications in the light of ARTs. In these two primary accounts of Bengali kinship, there are attempts to understand the ordering of relationship through indigenous concepts and hence to pit it against anthropological categories of kinship, decent, and marriage etc. These constructs did help us to understand production and reproduction of relationships in the infertility clinic to an extent. These accounts also provided us with an understanding of the variability of substance coding as an analytical concept in making and unmaking of relationships, personhood and agency.

However, what we realize after entering the field with this understanding at hand is that in the day-to-day practice of kinship in the infertility clinics, these textual understanding do not always in effect capture the reality. Dealing specifically with symbols and cultural construct rather than with what people do, what they think they do and what they say in Malinowskian dictum (1922), these constructs appear to be far removed from the practical kinship understanding. By following Schneider, these theorists leave out discerning features of things and only focus on their essence and hence fails to provide us with a theory which incorporates how the common man rationalizes differences which

72 These sets of encompassing and encompassed relationships are together linked to and encompass a third unit. Here one finds a direct application of Louis Dumont's path-breaking theory of hierarchy. What is interesting is that same complementarity of the parents is highlighted in the context of conception in Tamil Nadu also. For a discussion on complementary contribution by men and women, see Fruzzetti (1984), Busby (1997). For a discussion on unequal relationship see Leela Dube (1986).
exist in the so called monistic world. To understand the doing of kinship in everyday life it becomes a prerequisite also to understand differences among the interacting entities and persons. Absence of acknowledging such differences, conflicts, dualisms, dilemmas leads to conceptualization of the concrete at an abstract philosophical level with an exotic flavour.

The central problem with this model is the construction of monism, substance-code and individual personhood as distinct and unique to Hindu culture and, hence, drawing strict dichotomy with the dualism of the West. Such a stark distinction makes the model less applicable to understand doing kinship at the level of practice. This philosophical system, in an attempt to project a pan-Indian view of Hindu culture, also fails to take into consideration local divergences and plurality of thoughts and action which pervade everyday life while making and unmaking kin (Beteille 1990, Parry 1989). In sketching monism as the only running principle, it leaves no space for dualism. In this schema Bengali culture thus becomes "an extreme case of a philosophy of the concrete" (Trautmann 1980: 520). In this case, Schneider's fallacy has been increased manifold (Beteille 1990) in an effort to establish non-duality of substance and code at every point of time and space. This portrayal of Bengali kinship as unique in its combination of substance (both food and blood), affection and nurturance as ground for relatedness, is far from true. In this exposition what is at stake is that in an effort to move away from Eurocentric bias, there is equal probability of creating an artificial strife between kinship in West and East and sketch the two worldviews of monism and dualism in strict opposition (Parry 1989). It is important to remember that focus on relationality does not wipe out the notion of individuality in the Indian context. The mutually exclusive relationality and individuality more than often coexists within the same culture at different times and spaces (Beteille 1990). While supporting the doctrine that there is

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73 Barnett too proposes that substance-code should not be reduced "to biology or to monism or to some simple generative mechanisms (innateness or particles)" (Oster et al 1983:228).
74 As Lambert (2000:79) based on his ethnographic data in Rajasthan which is also part of the larger North Indian Kinship states that the respondents often felt that: "relatedness of this kind is actually superior to kinship created by birth, because one's relationship with one's birth parents is derived from sin (syu). Their comments suggested that relatedness not originating in sexual intercourse is considered purer than kinship produced through procreation.
denial of ‘easy separability’ of actor and action, substance and code in the context of Bengali Hindus, and Hindus in general, it is not unique to either Bengali or Hindu Kinship. Though definitely social is not always opposed to the biological nor do they always exist as encoded substance. It is important to look out for situation if any, when Bengalis are willing and able to distinguish between substance and code, between artificial and real kinship (Beteille 1990). This is because, though code of kinship may be extended to a point beyond biological substance, boundaries are drawn when it seems to alter other codes of conduct.

Our interaction in the field reveals that practical kinship do not correspond to this watertight categorization but draws on from both cultural and biological facts. The individuals who enter the infertility clinic on most account do so with the intent of building a relationship on biological criteria of relatedness. We would encounter clear instances throughout the thesis where individuals chose biological criteria over social or the other way round making clear distinction between the two. This population being

75 Though they do not deny that “usage pattern of Bengali kinship terminology places greater weight upon bodily than non bodily relationships and on shared rather than on given and accepted bodily relationships” (Inder and Nicholas 1977:91) but they claim Bengali Kinship to be part of a monistic world view unlike the west which is based on dualistic assumptions.

76 For example, blood as a metaphor for life itself and its easy transformability (food-blood-food) has been seen as peculiar to Bengali or for that matter, the Indian context ruled by monistic essentialism. Laqueur however traces this theme of thought to be prevalent even in Western medicine, dating back to the Renaissance:

Ancient medicine bequeathed to the Renaissance a physiology of flux and corporeal openness, one in which blood, mother’s milk, and semen were fungible fluids, products of the body’s power to concoct its nutriment. Thus, not only could women turn into men...but body fluid could turn easily into one another (Laqueur 1986:8).

77 In substantiating his demand, Beteille (1990) seems to be in conversation with Lambert (2000) that a person may treat and feel related to another person as mother’s brother or father’s sister, even if they are from castes different from one’s own. But this would not be possible if substance and code are inseparable at all point of time as illustrated by Marriott (1976a and b). He further points out that the pervasiveness of encoded substance as a category against substance and code, does not hold good in all situations e.g., a person may refer to and acknowledge someone to be her/his masi or mama, pisi or kaki without being ‘actually’ related to the same, but she/he would not share food with the latter if she/he belongs to an inferior caste. However, Beteille (1990) is himself conscious of the efficacy of the restriction of food transaction both in the present time and as it existed in the past.

78 The use of the term real and artificial kinship to my mind is to again fall back upon the idea that biogenetic substance has the highest capability of initiating relatedness. Though we do not disagree with Beteille in his claim that Bengali’s do at times distinguish between substance and code and places more weightage on biological relatedness but to resort to such a dichotomy of real and artificial kinship is to again move back to the point from where Schneider started his magnanimous reconceptualization.
exposed to the biomedical world often seems to be equipped with medical knowledge, whether holistic, partial or distorted far better than with cultural stories of conception and pregnancy. They often even go to the extent of discarding the folk model as false and misconceptions once they have been flooded with medical information either directly from the clinic, or from fellow patients or the visual, print media and virtual world of web. Giving too much credence to the texts thus would fail to capture the mixed narratives as far cultural stories of conception and pregnancy and transmission of genetic material are concerned where social and biological facts have been taken from both the realms alike giving rise to a knowledge base which is both spatial and temporal.

It thus seems that we have here, a case in which birth or procreation cannot simply, be conflated with biology in the sense of a given natural order. Nor does birth or procreation alone, defines kinship though it is often the central metaphor. This is because it does not only signify bodily biological birth, but also birth of a new web of relationships through sharing of food, land, locality and gift giving. It is also true that at a certain point of time, it is the biological substance which is solely taken to be the grounding factor of kinship, and there is a conscious willingness to separate substance from code, and to identify oneself as an individual, rather than a dividual entity. It is these diverse ways of making kinship, that we will delve into in the following pages as we encounter women and men in the infertility clinics doing and practicing kinship, through a dynamic process in place. In order to understand such interaction it is important to substitute an account of culture with the sociology of the lived experience of Bengali life, as this will bring in both the plurality of sociology and history that each culture is subjected to as well as its inherent ambivalences.