

**ASSISTED REPRODUCTIVE
TECHNOLOGIES AND KINSHIP: EMERGING
CONCEPTUAL ISSUES**

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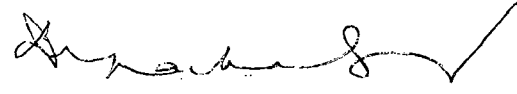
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CERTIFICATE

This is to certify that the dissertation entitled "*Assisted Reproductive Technologies And Kinship: Emerging Conceptual Issues*" submitted by **Manjeer Mukherjee** in partial fulfillment of the requirements for the award of the degree of **Master of Philosophy** of this University, has not been previously submitted for the reward of any degree to this or any other University. This is a bonafide work.

We recommend this dissertation to be placed before the examiners for evaluation.


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CHAPTER- I

INTRODUCTION

Assisted reproductive technology, kinship, and change – these are the central concern of this paper in order of their generality. To some extent this also indicates, in reverse order the importance that I impute to these three categories. Change is the main sociological concept that concerns me. The concept of ‘change’ is applied to the domain of kinship structures, its processes and values. Assisted reproductive technology is taken as the tool that will help us to understand ‘change’ in the conceptual and practical understanding of kinship.

Since the first ‘test tube’¹ baby was born on July 25,1978 (Stacey 1992:9) there has been an outpouring of debates, discussions on the theological, ethical, legal as well as feminist fronts. Surprisingly, there has been little consideration on the social and cultural consequences of such procedures. The changes in social structure and culture regarding the understanding of how babies are conceived; how ‘sex without reproduction’ and ‘reproduction without sex’ is an emerging phenomenon; and what it means to be a ‘parent’ or ‘relative’ have taken a back seat.

This is because, it is commonly presumed that conceiving a baby is a straightforward matter: that most people will be genetically related to the parents, who rear them, and most marriages will have baby as a product of the sexual union of the couple and generally one and only one baby² at a time. However, such stories of conception based on a set of natural facts involving the journey of the sperm to meet and fertilize the egg is forced to change especially in the face of a world of achieved assisted conception. As the scientific natural facts mutate, becoming more complex, less certain, less natural so do the accompanying “social facts” and cultural meanings. Thus

conception stories become the microcosm of cultural cosmologies. They celebrate the values of our kind of society, values of industrialism, technology, scientific progress and the control of nature. They also celebrate the great social institutions of medicine, law, commerce and the state. But the conception stories are also relevant to each of us at a personal level, defining as they do, identity, relationships and kinship obligations. Our study will concentrate on this critical interface with special reference to assisted reproductive technology.

In so doing, our claim moves away from the judgement of medical intervention as right/wrong, good/bad. Neither it is our task to romanticize women's relationship to their bodies nor to postulate some 'back to nature' argument regarding women's reproduction. Instead we will focus on the social and cultural consequences of this kind of reproductive interventions, not just for the experiencing few but for all of us. This is because over time the 'web of social relationships' in which childbirth or parenting has important cultural connotations is bound to impact everyone. Social anthropology provides the broader conceptual tools for the analysis of these recurrent themes of kinship and the related notion of what is 'natural'. Both these issues, explicitly or implicitly, compel us to break free from the familiar and thinking only in terms of the society we currently live in (Giddens 1982: vii, 28). Rather it provides a reflexive, conjectural, futuristic understanding of the concept of relatedness when use of NRT's (New Reproductive Technology-henceforth to be referred as NRT) are no longer a choice limited to a few but an available norm for large numbers. The task is made urgent by the very fact that the technologies being addressed here have already altered what can be taken for granted about reproductive processes (such as conception and pregnancy) reproductive identities (motherhood, fatherhood and parenthood) and reproductive ties and obligation (such as kinship).

The particular social order under consideration in this paper is the area of kinship and hence it will begin with a short selected review of the subject. This is particularly because kinship from its very inception, in spite of all its cultural specificity has been thought to be based on 'natural facts of procreation'. This has created divisions in society by "separating those who are genetically related to each other from those who are not so related" (Holy 1996:143). At the same time kinship is portrayed as "unchanging, and an objectively defined system" (Dumont 1961:75) complete in itself, without referral to the historical, political, or economic context (Rissew and Pariwala 1996:15-16). This makes it necessary in the present context to question, or, rather to examine its claimed unchangeability and timelessness. In fact, when the first cloned baby was due as early as on January 2003 (TOI, 28 Nov. 2002).

This paper will focus on technologies assisting reproduction, rather than on contraception and abortion. While, contraception in one form or other, and efforts to prevent or end pregnancy have been documented in ancient times (Scotland 1994), assisted reproduction is a relatively recent phenomenon and has created what may be called 'scientific revolution in human reproduction' (Stacey 1992:9). This is why its ramifications in the wider social order are of such immense sociological concern.

The present exercise locates itself in the interacting zone of medical sociology and social anthropology where through the concept of interest and its multiple modes of realization sociology forces us to look at the issue. At the same time it also pushes us to go beyond the rhetoric that is used to justify these new techniques and helps us to relocate whose needs and desires they actually serve. Social anthropology, on the other hand, reflects the understanding of how these macro-sociological, institutional issues affect the everyday living. Even though not everyone is explicitly in contact with NRT's

but by the very fact that they are now a part of the same world, the probability of large numbers getting affected by it cannot be overlooked. Consequently, questions arise on a variety of levels. At the conceptual plane, for example, can contemporary usages of the term kinship embrace the development in assisted reproduction when the developments appear to undermine the premises on which the term has previously been used? At the cultural, plane, for example, what are the symbolic meanings that was attributed to the origins of persons in society and how are they changing? At the political plane, for example, why in liberal democracies is childlessness an issue of health and well being and not a social or specifically a population problem? Lastly, at the practical level, how do parents cope with children who are not related by genes with either one of them or both or vice versa? Or, how do they cope with triplets or quadruplets, which is often the result of over success of invitro-fertilization, economically, emotionally and socially?

This attempt at conceptual clarification of the usage of the term 'kinship' in the light of NRT has its root in the resurgence of kinship studies specifically from 1990 onwards driven by the twin approaches of political economy, feminism (Stone 2001) as well as cultural anthropology (Holy 1996:6). More generally it can be attributed to Schneider's critiques of his own analysis of kinship on Yap in the Caroline Islands (Schneider 1984) which questions the assumptions and presuppositions that undergrid 'classical' kinship theory (Brettel in Stone 2001).

Under the impact of macro forces individuals in the empirical world are confronted with a series of new situations, and new networks, new choices and responsibilities which would have been alien to their parents or grandparents. The changes and challenges that confront kinship in the present epoch are many without the added intervention of reproductive technologies. This might tempt an idealization of past

kinship ties. Or it may allure one to claim that family and kinship relations are basic and 'natural' and do not alter much at the core in spite of economic, political, and biomedical changes.

Keeping this in mind, this dissertation paper does not take 'kinship' based on procreation as the natural universal and neither considers those that are based on adoption and fosterage as merely 'fictive', 'ritual', 'artificial', 'pseudo or quasi' kinship³(Holy 1996:166). Rather, it tries to begin by asking how people see themselves to be related to others and what they take as the defining criteria? Who are the people they consider to be more closely related to them. Following the Malinowskian dictum we will ask questions regarding what they do? What they say they do? What they think?

With this methodological position the following pages will examine how the new reproductive technologies have changed birth so profoundly. Even, the 'mother-child bond' (Fox 1976) which is seen as the basis of all kinship systems is under stress. This is because surrogate motherhood can bring about a situation in which 'the social mother (i.e. the commissioning mother) is one individual, the provider of the egg another and the carrying mother a third' (Parkin 1998:125). In addition, the semen may also come from a donor. Thus, involving five persons altogether – among which three of them share parenthood outside marriage.⁴

The assumptions regarding kinship thus need to be critically reviewed as NRTs apparently complicate the very notion of kinship based on blood or gene. At the same time it brings into question how kinship theories answer for the presence of 'niyog' or engendering of children by someone other than the social father⁵ in the days of the Mahabharata. Or, how does it account the mythological birth of Sita and Draupadi⁶? Thus the question arises at two levels. Whether kinship based on biological model and

procreation is universal and applies to all societies of all time. Secondly if it is based on an Euro-American model, then how far the 'modern story' of conception (the genitor vs. pater and mater vs. genetrix) can be incorporated in this model. This also brings in related questions viz. do the notions of adoption and fosterage and the accompanying norms, morals, duties, responsibilities and obligation applies or fall short of to that of children born out of NRTs. And of course how one negotiates the incident "where two patients, both men committed suicide after being told they would never be able to have children of their own. The second, even accepted a donor's semen for his wife but still killed himself" (Outlook, July2002: 54). Moving from the practical to the more intricate theoretical level we are bound to ask how the issues underlying kinship in Euro-American cultures (NRTs, gender, social constructions of science) impinge on the concept of 'relatedness' (Carsten 1995) cross culturally, especially in India.

At the end of the journey we question the concept of kinship itself. We try to inquire whether the concept of kinship was ever a universal concept and how it can be so in the face of NRTs. If biology or nature has been the grounding for the social (especially in the western conceptualisation), and if this relationship now appears to be destabilised, then how does this impact upon our understanding of kinship. This is the focus of the present project. Thus, ultimately, we place the concept of kinship in the wider debate between the biological and the social.

It is a fact that the mere destabilisation, or replacing, or renaming a phenomenon does not solve the problem involved in its conceptualisation. But that there is a rethinking of the concept implies two things. Firstly, that 'new' approaches realize the necessity of evaluating a concept which has become a standard, a normal, a given. Secondly, at the same time, to come to terms with the reality that there has been no

serious consideration of a substitute for 'kinship', and that the concept continues to be based on the dichotomy between social / biological, nature / nurture.

Why are we still interested in continuing with this dichotomy between social and biological in our understanding of social and cultural impact of reproductive technology, is itself a question that needs serious consideration. Quite obviously we owe a continuing debt to our anthropological ancestors from Morgan to Schneider in the study of kinship. The present paper starts with this in mind (Chapter 2). The next step is to give a history of new reproductive technology, focussing on those that assist reproduction (Chapter 3). Having identified our key concepts and their historicity, we come to the central focus of the paper. The remaining chapters will view kinship in the light of new reproductive technologies and relocate questions such as, what makes a person a relative, and, what is the irreducible fact of motherhood, fatherhood, and kinship networks.

NOTES:

¹ Although petridishes rather than test tubes are the vessels in which sperms and eggs are combined

² In most cultural and religious belief systems having one baby is seen as normal,³ twins are disliked leaving aside triplets and quadruplets that are often results of over successful invitro-fertilization on the ground that (i) it is animal like for a human mother to have more than one baby at a time; (i) to babies must mean two fathers, the mother must therefore either have committed adultery or have conceived the second baby through an evil spirit.(Bryan 1992)

³ Portraying the idea that they are deviations from the normal.

⁴ However, we have seen this fragmentation is not in itself either new or rare: anthropology has long make basic distinctions between pater and genitor (though a less commonly made distinction is that between mater and genetrix). It is also relatively familiar through step relationship and adoption.

⁵ The birth of Dhritarashtra, Pandu and Bidur in Mahabharata

⁶ Where the genetic father was not the social father and mystery of the birth is unknown or not given importance to.

CHAPTER-II

KINSHIP THEORIES REVISITED

The understanding of the concept of 'kinship' in the light of 'New Reproductive Technology' makes it mandatory to retrace the journey that kinship studies have made in order to position it today. This is because it is almost impossible to explain the present state of affairs without saying how they came to be that way. However, this is not as if the theoretical review presently undertaken would be totally exhaustive. But, rather the theory and aspects of kinship that is highlighted and the trajectory of the historical path that is undertaken reflect my own theoretical bias as well as general practical necessities. Moreover, to describe the evolution of kinship studies in 'Whig historical' terms, to portray a linear progression would be to paint over a nuanced multi-dimensional reality. Because, behind this apparent continuous unilinear history of kinship lies a complex story.

Kinship studies which remained anthropology's 'signature in trade' till the second half of twentieth century (Stone 2001), gained its initial footage in law and jurisprudence. It was the American lawyer Lewis Henry Morgan (1877) who established it as an intrinsic part of the anthropological discipline. From then onwards kinship studies gained such momentum that there was hardly any anthropologist of import who did not chance his hand in the ongoing theoretical debates. Bronislaw Malinowski, W.H.R.Rivers, Raymond Firth, E.E.Evans Pritchard, Jack Goody, Claude Lévi-strauss, Louis Dumont, Rodney Needham, Ernest Gellner, Harold Scheffler, David Schneider, are amongst those who contributed significantly to kinship theory. Thus, one can well imagine the bulk of literature that is available. Robin Fox, thus, justifiably claimed in 1967 that "Kinship is to anthropology what logic is to philosophy or nude is to art; it is the basic discipline of the subject."

This is not only because anthropologists have traditionally been most interested in societies and people who carried out the bulk of their social interactions in terms of kinship (Parkin 1995: 131). Also not as Holy feels “in all other aspects of social life which anthropologists study, they share their interests and seek theoretical inspirations from specialists in other disciplines and hence cannot predominate” (1996:1). Or as Barnes puts it “Kinship is that aspect of culture with the closest link to nature” (1973:64). But this is so because the very study of kinship held for anthropology the promise that study of *Suicide* and *Division of Labour* held for Durkheim, to emerge as a true science of society.

At first glance kinship appears to be characterized by vast ethnographic data, elaborate classifications, arcane jargon, complex genealogies, and exotic kinship vocabulary. But an in depth analysis reveals certain underlying basic theoretical themes and controversies. To begin with: whether kinship should be defined substantively, (that is with regard to the respective positions of individuals within a whole system) or in relational terms is the question, which has been long debated. In its broader purview, the former trend is identified with parts of the British school from 1930's to 1960's, reaching its zenith in the works of Meyer Fortes and Jack Goody. They defined clans and lineages in themselves, as separate, concrete entities. Thus what counted, as the defining criteria of clan and lineages were who belonged to them and what functions they performed. However, the relational aspect became more prominent in the French tradition with Claude Lévi-Strauss's *The Elementary Structures Of Kinship* (1969) where the link between clan and lineage through marriage gained importance. This thus led to the long and sometimes bitter controversies of what came to be known as the Descent theory and Alliance theory debate. Simultaneously, it brought in another persistent question regarding what were the constituent elements of kinship – descent, siblingship, or affinity.

Early British anthropologists including descent theorists like Radcliffe Brown (1940), Fortes(1949), Goody(1958) effectively limited it to the ties within the family, kindred and consanguinity. However, marriage ties became the sole criteria of kinship in the French intellectual tradition.

Another point of contestation characterizing kinship studies was the relationship of kinship system to the social system in general. The sole question thus became whether kinship should be seen as an organic whole, an idiom through which other domains¹ operate? Or it is to be seen, as a system in its own right, and as a system of classification.

However, the crux of the matter is that these debates have come and gone, yet the relationship between 'kinship' and 'biology' (Stone2001) has been at the core of both previous and current theoretical differences and controversies. It is also the ground on which the present paper unfolds itself. This is because the discussion of how such a distinction might operate in any particular society and culture has forced one to think and rethink what we as social anthropologist might mean when we employ these terms.

Though, these issues have been directly confronted by Schneider (1964), Needham (1960), Gellner (1960) and the new wave of kinship studies from 1960's onwards – it would be wrong to begin with them. This is because there is a clear sense in which this theme underlies the work of anthropologists from the days of Morgan (1877). It is only in reference to these predecessors that the new form of the debate viz., the articulation of 'social' and 'biology' with each other, would make sense. Also it needs to be admitted that instead of gaining theoretical consensus the issues are becoming more and more problematic.

Thus, the present paper will start with Morgan's (1877) formulation of kinship terminology. He reflected that people's understanding of their biological relationship is

based on their marriage practices. Morgan believed that classificatory terminological system² reflected an earlier stage of 'primitive promiscuity' characterized by indiscriminate mating, even brother-sister marriage. Therefore, there was no special term to distinguish 'real' father from a larger class of potential fathers. Since all women of one's mother's generation were equally wives of these men, they too were lumped together with a single term. To Morgan, this suggested that if the mother's brothers were called by the same term as the father, they must have all been previously the child's father. This to him was possible only if brothers were married to their sisters and had sexual access to them. The other kinship terminology in Hawaiian system that supported this was that a man called not only his own children sons and daughters but also all his nephew and nieces. Morgan believed a later stage of monogamy brought about descriptive terminological systems that distinguished fathers and mothers from collateral relatives.

Later theorists no doubt denounced such evolutionary speculation. But they retained (i) the component of comparative theory of formal properties of kinship terminology and (ii) structural-functional theory of the relation of kinship terminology to social formation (Uberoi 1999). Over time this initiated the ongoing debates³ of whether to see kinship as human recognition of biological bond or social interpretation of assumed biological bonds (Holy 1996, Schneider 1984).

As early as in 1906, Gennep (quoted in Holy 1996) first criticized the notion of ignorance of biological paternity which, according to Morgan, must have existed in his hypothetical 'consanguine family'. He pointed out the basic difference between 'parente' sociale' and 'parente' physique'. It was thus quite inevitable that this question of paternity and whether 'biology is the ground for the social' could not also escape the thought process of a great thinker like Malinowski. Quite naturally, he even implicitly

went a step further in highlighting the complexity of the issue. This he did by bringing in what he thought was indispensable: 'the natives' point of view'. In his early study of the family among the Australian aborigines, who were reported to be ignorant of physical paternity, Malinowski clearly drew the difference between biological kinship and its social or cultural conceptualization.

This realization dawned on Malinowski when he visited the Trobriand Islands of Melanesia. There he tried hard to convince his informants of their oversight in thinking that the male contribution was unnecessary to the production of pregnancy. Was it not true, he insisted that intercourse is necessary for conception to occur? His informants remained firm and replied if there is a causal relationship between intercourse and pregnancy, then why do so many young girls who have intercourse not become pregnant? Children they argued result from return of an ancestor through the body of a woman (Malinowski 1925). He thus located that beliefs about procreation and parenthood represent key cultural concepts. Thus, unlike western notions the Trobriand father was not the child's kinsmen but merely the child's mother's husband⁴. He thus differentiated two kinds of father – 'genitor' and 'pater'⁵. Though Trobrianders traced descent on the matrilineal line, they maintained that a child never resembled its mother or any of its maternal kin but always his/her father (Malinowski 1929:204). The paternal resemblance derived on the one hand from the father nursing the baby in his arms or holding it on his knees, or "because his hands have been soiled with the child's excrement and urine"(1929:20-21). Malinowski thus emphasized that consanguinity as a sociological concept is "not the physical bond or common blood, it is the social acknowledgement and interpretation of it"(1913:182). He thus made it clear that 'consanguinity' is the set of relations involved by the collective ideas under which facts of procreation are viewed in a given society.

This distinction of 'genitor' and 'pater' brought out by the 'emic' view of the 'natives' was more strongly forwarded in the study of Nuer of the southern Sudan by Evans Pritchard (1951). The Nuers, he showed, not only followed this principle but developed it up to the limits of its logical possibility. They legalized marriage by the transfer of bride wealth (cattle) and the 'pater' was always the person in whose name that had been transferred to the woman's kin. Thus it was almost a compulsion for a Nuer man to marry and have sons in his name. But often a man died before he was married. Then it became the responsibility of the man's kinsmen to marry a wife in his name – such that the child born is to be considered as the child of the 'ghost' of his deceased kinsmen (1951:109-11). Thus, it became logically possible for an infertile woman to provide bride wealth – cattle, and to marry another woman. The woman-husband had all rights and was the pater to the child born⁶ and was addressed as their 'father' (1951:108-9). As we see in this case, the Nuers were remarkably unconcerned with physiological paternity and did not attach great value to the process of begetting⁷. In the way the Nuer talked about children, it is as if they imagined that cattle and not men begot children. "Our children" they would say are "children of our cattle-*gat ghokien*" (1951:22,78). In a very real sense, the Nuer saw their 'pater' as their 'real' fathers. In that respect, their ideas about paternity differed from those prevalent in the west. This is because, in the west, adopted children see their biological fathers as the real one. Hence, it was quite obvious that a Nuer boy, who had grown up with his genitor and treated him as his father, was eventually assimilated in his pater's clan and lineage because this in their understanding constituted 'real' paternity.

Radcliffe Brown also emphasised the relationships of descent in Kinship. According to him:

"In any given society a certain number of these relationships are recognized for social purposes i.e. they have attached to them certain rights and duties or certain distinctive modes of behaviour. It is the relation that are recognized in this way that constitute what I am calling a kinship system, or in gives full a system of kinship and affinity" (1952:52).

This brings out well enough the importance of genealogical categories in Radcliffe Brown's formulation of kinship. Indeed, it brings out more than the author intended. The word 'recognized' gains a new order of meaning; as it suggests that genealogical relationships are of primary importance and in some way have rights and duties inherent in them. This is no doubt the way in which a well bred Englishman is brought up to think of the matter: towards one's relatives one has categorical obligations.

In the same line of thought Meyer Fortes restated in his book 'Kinship and The Social Order' (1969) that it is "the irreducible genealogical connections, the given relations of connectedness, which are universally utilized in building up kinship categories." And with regard to kinship terms, he viewed:

"their distinctive character arises from the generally recognized fact, that the relations they designate have their origin in a distinct social life, the sphere which for both observers and actors, is demarcated by reference to the base line of genealogical connection"(1969:53,251-2).

In this light Fortes's view that no society denies the natural fact that women give birth to children, whatever the 'native' theories of procreation may be, should be brought in. Thus, Fortes sees the 'mother and child couple' to be the unique and irreducible source of all human existence. He argues that in primitive societies the domain of domestic relation is commonly organized around a nucleus consisting of a mother and her children. Thus, he draws the conclusion that aboriginal cultures have managed without human genitors, while ascribing a relation of social fatherhood to the mothers' husband⁸. For Fortes, the cultural recognition of filiation i.e. the fact of being child of a

specified parent implies the recognition of certain sets of relationships, viz. between the child and its mother, the child and its father, and between siblings (children of same parents).

This position is most clearly formulated by Robin Fox. He takes the mother-child tie as 'inevitable and given' (1967). He considers this to be the basic-unit of all kinship system; no matter in what way mother came to be impregnated. He very emphatically argued that:

"genetic kinship is the 'model' for fictive kinship relations. Although the adopted child is not related by blood to his parents and siblings etc. he can be fitted into niche of 'child', and assume this role as though he were in fact the offspring of his legal parents"(1967: 34).

What he believed is that, this is the basic, fundamental feature and is common to both human and animal society. Fox's argument runs thus: the elements are common but 'the combination is unique' (Fox 1975). He thus laid the entire basis of kinship in the biology.

Till now we have traced the emphasis that was given to biological grounding in formulating kinship theory. However, this is in no way to negate the fact that throughout the history of kinship studies, anthropologists had of course noted some slippage between real or presumed biological relationships and 'kinlike' relationships (Stone 2001:3) that did not correspond to biological ones. In this regard one could mention the common examples of adoptions, 'ghost marriage', descent group formed through common residence and so on. But, how this slippage or what can be termed as a difference between 'social kinship' and 'physical' or 'genetic kinship' (Barnes 1961) has to be conceptualised is another matter, both in its form and essence. This is because, though anthropologists of the order of Malinowski, Barnes, Beattie dealt with social

kinship – it was for them the social aspect of biological kinship that was of high import and not the social aspect of social kinship *per se*.

An early debate, in this regard, was the one between Needham and Gellner. Gellner suggested that an ideal language for kinship theory could be developed based on various possible kinds of biological relationships. He thus argued that kinship as most anthropologists define and analyze it, lies in the connection between kinship systems and actual facts of human biological reproduction. In this sense, so-called social kinship may be seen to select from and even distort the realm of human biological reproduction (1960, reprinted in 1973, 1987). However, in direct contrast, Needham argued that “biology is one matter and descent is quite another, of a different order” (1960:97). Replying to Needham’s argument, Gellner argued that social relationship is concordant with physical kinship and “the main condition for the relationship being classed as kinship” (1987:164). He argued strongly, “what other than at least partial overlap with physical kinship, could conceivably lead a relationship to be classified as a part of kinship structure (1987:164)?” Thus, he pointed out that Needham’s own example of leviratic marriage, adoption, ‘ghost’ marriage prove the very opposite from what Needham imagines they illustrate. In his view:

“The anthropologists kinship term leviratic is only applicable when certain real kinship relations obtain. The relationship and its offspring can only be identified leviratic because the anthropologist knows that the fiction by which offsprings are raised ‘in the dead man’s name’(1987:164).

The same can be further explained, he viewed, with the concept of adoption. As the possibility of classifying offspring as adoptive, depends on the observers’ knowledge of the disparity between social and physical kinship. He argued that it was this disparity which gives the term its meaning. What, thus, comes up from Gellner as the definition of kinship, is that:

“[Kinship] is a system of social relationship such as are functions of (are regularly related to) physical kinship bearing in mind that the function is not identity; the rule relating the physical kinship and social relation being generally complex, involving additions, omissions, and distortions; and all this notwithstanding the fact that individual instances of the relationship may occasionally diverge from the rule (e.g. consequences of undetected infidelity) and also that individual concepts within the system of social concepts (e.g. Godfather) may fail to be related indirectly by any rule to physical kinship” (1987:169).

Needham, however, argued against the ‘average’ anthropologist belief of kinship as a matter of ‘flesh’ and ‘blood’. Kinship, to him, far from being universal is so variable in its marriage practices, descent incest and terminologies, that it is no more than an ‘odd-job word’. He proclaimed that there is no such thing as kinship (1971). If kinship was not the same thing in different cultures, then the comparative endeavour of anthropology failed because like was not being compared with like. Thus whereas in Gellner’s view kinship is an anthropologist’s category and hence universal; to Needham it is the people’s own view.

Scheffler (1973) by contrast, based his definition of kinship directly on native perception. He viewed rights, duties, privileges and obligations that are commonly associated with fatherhood in western society, may be allotted to different men⁹ in many non-western societies. And hence he took a position somewhat between Gellner and Needham. In Scheffler’s formulation a certain relationship in a particular culture would be classifiable as ‘kinship’, if people themselves understand it as ‘genealogical connection’. He thus based his argument on people’s own folk-culture theory of human reproduction. Scheffler distinguished ‘genealogical connections’ from that of ‘genetic’ ones as understood in scientific biology, and claimed that:

“the kinship relations of interest to social or cultural anthropologists are those genealogical connections whose existence is presumed by or known to any people; not those posited by or known to any scientific discourse” (1973:249)

With due recognition to the variations, Scheffler sees the relationship between genetrix¹⁰ and her offspring; and genitor and his offspring as complementary cultural universals. He thus concludes that, "the elementary relations of any kinship system are best defined as those of genitor-offspring and genetrix-offspring *per se*"(1973:755).

Thus for Scheffler, in contrast to Gellner, actual physical kinship was not the issue. Neither like Needham was it entirely detached from 'biology'. His position was probably all along closer to the way in which most anthropologists implicitly conceptualised kinship. However his conceptualisation may appear to be restrictive, as people unrelated biologically may be related through social bondings as in the case of adoption or social fathering.¹¹

In this regard the powerful argument of Lévi-Strauss(1969) comes in. He opposed seeing relations created through engendering of offspring as primary whether in the context of a nuclear family or in its absence. This is because to Levi-Strauss, kinship is not a static phenomenon but exists only in self perpetuation. As a unit consisting of parents and their children cannot perpetuate itself because of the universality of incest taboo,¹² it cannot be the base of kinship system. For a kinship system to survive, a man must obtain a woman from another man who gives him his daughter or sister¹³. Thus for him the basic unit of kinship is 'avunculate' i.e. a structure which consists of a brother, his sister, sister's husband and sister's son. Not that Levi-Strauss succeeded in establishing 'the' paradigm for kinship but no one before him had gone so far in reaffirming "that kinship system does not exist in the objective ties of descent or consanguinity between individuals. It exists only in human consciousness; it is an arbitrary system of representations, not the spontaneous development of a real situation"(1963:50).

However, the man who further delved into the emics of kinship is David Schneider(1968:1984). Schneider is a key figure for a number of reasons. His *'American Kinship:A Cultural Account'* (1968) was highly influential for later culturalist analysis of kinship. A crucial aspect of Schneider's influence is the role played by 'nature' or biology and its separation from law, which is itself encompassed by culture. His later book *'A Critique of the study of Kinship'*(1984) can be read as a commentary on his early monograph in which he forwarded a rigorous and incisive critique of his own analysis of kinship on Yap in the Caroline Island. This henceforth called for the demise of Classical Kinship theory. By outlining American kinship as a cultural system he brought in a path breaking symbolic link and a 'new' approach to culture. Schneider views the sexual reproduction as a core symbol of American kinship which was defined by two dominant orders, that of nature or substance and that of law. The sexual union of two unrelated partners in marriage provided the symbolic link between these two orders. Thus, he based kinship on blood and marriage. He claimed a 'blood' relationship is formed by a single act of sexual intercourse in which the sperm provided by the men reacts with egg within the female to create a new being, their child. The child's natural mother and father are given and fixed forever, at the time of procreative endeavour and blood is a state of 'shared biogenetic substance', symbolising enduring solidarity. The idiom of nature was crucial to American kinship. Thus, "the family...formed according to the laws of nature.....lives by rules which are regarded by Americans as self evidently natural."(1968:34). 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 instincts 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 (1968:107)".

Schneider thus asserted that kin relationships that draw from the 'Order of Nature' (1984:27) are based on human biological reproduction that results in the transmission of biogenetic substance from parents to children. Whereas blood relatives are seen as part of the given order of nature, relatives by marriage are seen as part of the 'Order of Law' (1984:29), which is imposed by men through their own customs and habits. Schneider refers to the obligations and privileges deriving from the 'Order of Law' as a "code for conduct" Marriage while recognized as being "culturally natural" (Allan1979: 31), to members of the culture it is not seen as part of the order of nature. It is a human construction and a social arrangement, a way in which people order their social world. Consequently, as a principle of kinship it differs from blood in that it can be terminated and changed. Schneider maintained that Order of Nature and Order of Law worked separately and together producing three classes of kin – (i) those related in nature, (ii) those related in law, (iii) those related by blood or both in Nature and Law. The class "by blood" represents the class most highly valued in American culture. Schneider wrote "substance has the highest value, code for conduct less value, but the two together have the highest value of all"(1984:63).

However, while this distinction of biology and social sounds rather repetitive of the predecessors, what makes Schneider's conceptualization unique is the very fact that he realized that no doubt:

"these are biological facts ... There is also a system of constructs in American culture about these biological facts. That system exists in an adjusted and adjustable relationship with these biological facts.

But these biological constructs which depict these biological facts have another quality, which means they represent something other than what they are, over and above and in addition to their existence as biological facts and cultural constructs about biological facts (1968:116)".

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Schneider took the discussion about the role of biology in the anthropological study of kinship further in his later work (1984) and viewed that most anthropologists had in one way or other persistently defined kinship in relation to human biological reproduction. They did so because of an implicit and erroneous assumption, viz. their own western cultural notion that "blood is thicker than water" is a human universal. They assumed that human reproduction everywhere establishes links between people that are imbued with special qualities and hence distinct from other social relationships formed in some other way. He views that: "the study of kinship derives directly and practically unaltered from the epistemology of European culture"(1984:175). Thus, through their studies of kinship anthropologists were merely imposing their own cultural notions on the lives of other people and were producing an ethnocentric distortion of other people's cultural identities.



This unexamined belief gave rise to what Schneider calls the Doctrine of Genealogical Unity of Mankind, that relationship based upon human reproduction can be organized into categories (such as mother, father) that are comparable cross- culturally. Schneider argues that as children everywhere are borne by women and the role of the father is usually culturally recognized, everybody everywhere can point out their mother and most people in most societies can point out their biological father as well. As a result "one usually can collect a genealogy as far as the informant's memory will carry him" (Schneider 1980:13-14). But it does not follow from this that links between parents and children are necessarily ascribed the same cultural significance which they have in western societies. Obtaining basic information on relatedness¹⁴ through the use of

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genealogical method results invariably in imposing the notion of kinship as a system of genealogical relations on societies whose own cultural notions of relatedness may be quite different.

Using the material on Yap in the West Caroline Islands (Schneider 1984), it can be shown as Schneider himself did, that 'motherhood' and 'fatherhood' did not have the same connotation as is prevalent in Western anthropological discourse. The people on the island of Yap address each other by names (even their parents) except in special formal and ritual situation. The term Yaps provide for the 'man who begot him' is 'citamangen'. However, it includes not only his father, but also his father's brothers and his male patrilineal parallel cross- cousins. The same is the case for the 'woman from whose womb' the person is born – the 'citiningen'. Though this is neither unique nor unusual, what is rather special is that the 'fak' has only one citiningen and one citamangen at one time and is never without it. Though this can at first sight be mistaken as mapped in a genealogical grid. But it would be wrong to do so. This is because though the Yapese like anyone else anywhere was born out of a woman and begotten by a man – the cultural assumption of the biological fact is irrelevant to them. Thus, what is significant about citamangen for the Yaps is not that he is the father or some other man who succeeded the father to his position. But that he is the figure of authority and superiority. Similarly, the one referred to by the reciprocal term is dependent, obedient, and respectful. The 'citamangen-fak' relationship, moreover, exist between those who hold land (generally the head of 'tabinaw') and those who acquire rights in that land provided they work on it, are respectful and obedient, and look after the elder's property. Thus, for them it is not kinship but land which is culturally salient. Rather than seeing the right to land as deriving from specific kinship ties among people, the kinship relationship is encompassed in the idiom of land.

This led Schneider to conclude that (what he himself had not noted earlier) patrilineal descent group for the Yap was in fact a unit based on land use and ownership¹⁵. On this ground, he claimed that kinship could not be formulated based on universally acknowledged "facts of life" i.e. biology. However, he is of the opinion that once kinship is debased from its biological rooting, the whole edifice of anthropological kinship concepts (descent groups, patrilineality, matrilineality, marriage, genealogy and so on) comes tumbling down. Schneider, in thus questioning the universality of kinship shook the ground of its "theoretical centrality" and brought it down to one of "marginality in the discipline of anthropology" (Stone 2001:1). Going further, he said for anthropological purposes "there is no such thing as kinship"¹⁶ (1984:vii).

However, by asserting such an extreme belief it becomes quite inevitable that a number of criticism would have followed (Hughes 1988, Strathern 1992, Franklin 1987, Shimizu 1991). But Schneider's treatment of what lay beneath the attack on the viability of kinship as an analytical category remain justified even today (Holy 1996, Stone 2001). The first among the two interrelated themes (which was also the ground for second) is that the whole idea of kinship: is based on the premise that kinship has to do with the reproduction of human beings, the natural fact of procreation; and relations between human beings that are concomitants of reproduction. This consideration of biological relations as having special qualities in them that they create constitutes bonds, ties and solidarity relations had been severely criticized by Schneider. This is because he sees in it a reflection of a particular culture: viz. Western and specifically American. It is so because, even if a culture recognizes the commonality of blood among some people, it does not ascribe the same meaning and importance as western culture does through the metaphor 'blood is thicker than water'.

This led to the related theme that anthropological analysis was more and more demarcating the exotic 'other' whom they claimed to have 'extended', 'more'

complicated kinship structure than those of modern West. Kinship in anthropology thus became heavily burdened with analytical and judgmental eurocentrism that needed to be transcended.

With all this Schneider turned 'kinship' upside down in at least one sense. Kinship, which used to be regarded as of genuine importance only elsewhere, seems rather suddenly to have come to be regarded as of importance 'here'. Kinship, which used to be the almost exclusive province of the otherness, seems rather suddenly to have become a capital province of anthropology of sameness (Stone 2001, Faubion 1996). As Schneider specifically mentions – properly investigated, kinship might turn out to be 'a special custom distinctive of European culture, an interesting oddity at worst like Toda bow ceremony' (1984:201).

Schneider thus left little room for the possibility of recovery or reform in anthropological theories of kinship. By accusing all his colleagues and even his own previous work as ethnocentric – “the most serious sin of all in anthropology” (Kuper 1999:149); Schneider ‘was not only undoing anthropological kinship but by implication anthropology itself’ (Stone 2001:6). Even ‘sociology and biology were revealed to be not false science but ethnosciences (Kuper 1999:145-46).

Schneider’s emphatic claim that “robbed off its grounding in biology, kinship is nothing” (Schneider 1984:112) and “its simply not possible to conceive of genealogy without the model of pedigree” (1984:55) was very influential. So much so that in the wake of his critique nearly a whole generation of anthropologists largely forgot about kinship as a distinct domain. Though, it seemed more or less impossible what anthropology would look like without kinship, yet from 1970s onwards, the position of kinship as a field of study within anthropology had been under question. The constant tension of whether “kinship is dead” (Faubion 1996:67) and recurring hope that “long

live kinship” (Faubion 1996:67) has made the anthropologists ask the question: ‘whatever happened’ to kinship. However, one might say simply as Schneider (1995) did in an interview published shortly before his death that “the kinds of problem changed” and “it isn’t just kinship...it’s the whole idea of discrete, functionally specific institutions...[as] major things of which society is made... was abandoned (quoted by Lamphere: 2001).

The shift away from kinship was part of a general shift in anthropological understanding from structure to practice, and from practice to discourse (Carsten: 2000). This was part of a wider recasting of the nature of social and cultural life, which involved the breaking down of discrete domains of economics, politics, religion, and kinship, which had defined anthropology. Moreover, it was generally true that the “preference for homogeneity and hence for stability and equilibrium as well” which is “explicable by reference to the anthropological concentration on so called simpler people and has persisted longer in the study of kinship than in economic or political anthropology” (Barnes 1971:265) had undergone a structural transformation.

However, strangely enough as Schneider himself notes about kinship, “phoenix like it’s risen from its ashes” (1995, quoted in Lamphere: 2001). This he believed has been possible due to people like Marilyn Strathern and attributes this to those in gay and lesbian studies, like that of Kath Wetson and Ellen Lewin and to feminist work from Sylvian Yangisako.

However, in another way this shift can be attributed to Schneider himself. As it is while delving into the question of natural or biological in Schneider’s study that an array of further debates had cropped up. As Franklin (1997, quoted in Carsten: 2000:7) comments at least three different ‘natures’ emerge from Schneider’s analysis of American kinship beliefs: (i) ‘biogenetic substance’; (ii) nature as in ‘what animals do’;

and, (iii) human nature as in 'man is a special part of nature'. Franklin demonstrates this tension between 'nature' as a coherent symbolic idiom in kinship; and views nature and biology as separate and distinct realms can only exist in scientific facts. So does Simizu (1991:384) as he views that if anthropology is restricted only to 'emic' 'internalist' perspective then 'it should constitute a reversal of western ethnocentrism. That is to say, a 'folk ethnocentrism' will develop. In order to overcome both kinds of ethnocentrism, a third alternative is necessary.

It is in the pretext of this 'new kinship'¹⁷ and in a quest for a 'third alternative' that the present paper will try to locate how issues underlying recent work on kinship in Euro- American cultures, on new reproductive technologies, on gender, and on the social construction of science settle the question of the social and the biological. Moreover, it is necessary to find how it impinges the study of kinship in India where also 'facts of nature' are changing at a fast pace with the introduction of NRT. The distinction between what is made and what is given and the degree to which kinship is necessarily predicted on 'biological facts' thus become more complex, and critical. So does 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.

Thus even in the early part of the twenty-first century the debate between the biological and social have by no means been settled. Hence it calls for a critical understanding of 'what is kinship' – the question that has been age old. However, the answer to this is bound to be new as the debates have shifted ground. In an attempt to understand 'whatever happened to kinship' in 'the light of NRT' David Schneider has a pivotal role to play in a unique way. This is because though Schneiderian efforts to

dismantle kinship have not succeeded, in quite a different sense he has succeeded. That is because kinship is no longer a 'distinct' domain in terms of how and for what purpose it is to be studied. It thus becomes mandatory for the present study to question whether can we define kinship in such a way as to leave scope for the inclusion of a broad range of relations and behaviour while taking account of Schneider's critique?

This however is not to deny the very fact that description of cultural logic, which underlies the notion of relatedness, has its own antecedents in the traditional discourse, of which it is openly critical. This seems inevitable, as it is the traditional discourse, which equipped us with many concepts without which the act of cultural translation, which lies at the root of all anthropological endeavours, would not be possible. The perpetual recourse to these concepts indicates the importance of the contributions of those generations of kinship theorists of whose works and assumption we are now openly critical. We could not get on with what we are currently doing if they did not provide us with the vocabulary through which we can communicate the sense of any particular culture to an audience in another culture. And in that, if nothing else, lies the necessity of the present chapter – without which the present interaction between the concept of kinship and NRT would not make any sense.

However, before we probe into the actual matter, which is in no sense an attempt to reveal some finite truth, we must be clear as to what we really mean by the frequently used term NRT, in general, and assisted reproductive technology, in particular. What is new about 'new reproductive technology'? How is it different from old reproductive technology becomes necessary to clarify. At the same time it is critical to face the question, which has been hovering above kinship studies (implicitly or explicitly) for long, viz., why reproduction becomes such an important phenomenon not only biologically but also socially and culturally?

In an attempt to relocate these questions, if not with an emphatic claim to answer the same – the next chapter will generally focus on how, why, and when reproduction has become such an important cultural issue. This will be seen through the changes in reproductive technologies, which claim to change reproduction itself, and hence questions some basic certitudes of human society.

Notes:

¹ Like economy, polity, and religion.&

² Where lineal and collateral relatives are merged

³ This unsettled debate continues even today, spanning over a time frame of a century and even more.

⁴ That is a person related to the child only affinally through a marriage link.

⁵ A distinction, designated by terms borrowed from Roman law (Holy 1996:16).

⁶ The woman-husband asked one of her male kinsmen, friends or neighbours to beget a child by her wife in her name.

⁷ Here we must remember that this in no way reflect their ignorance of physiological paternity; but we must come in terms with the fact that it is as 'natural' as to give little or no importance to biological birth as it is to make it the sole criteria, the grounding factor of kinship.

⁸ Here we find close similarity with that of Malinowski, though both differs in their focus of what constitutes kinship.

⁹ Just as a man assume some of these rights because he is a presumed genitor; others because he nurtures the child and yet others because he is the child's mother's husband.

¹⁰ Here it would not be out of place to mention that male bias in anthropology have prevented the anthropologists even to locate the separation of rights and duties in case of women in other societies which is associated with women –mother in western societies. This stems from the belief of mother child bond as fundamental, natural and biological.

¹¹ This may seem to a definite return back to Morgan's understanding of kinship from people's point of view.

¹² This to Lévi-Strauss, is a signifier of transition of human kind from a state of 'nature' to one of 'culture'.

¹³ This view has been criticized mainly because it reduces women to objects and denies them any active role in the institution of marriage.

¹⁴ However, whether relatedness is 'the' term that can be used instead of kinship is in itself a question. Though, Carsten (1995,2000) extends the notion to relatedness; Holy(1996) criticizes on the much debated ground as to what then distinguishes friendship, neighbourhood from that kinship.

¹⁵ Leach (1961) had expressed a similar concern, when he noted in Pul Eliya, Srilanka, that "kinship system have no reality except in relation to land and property (1961: 305). And as Andrew Strathern would put it that food is a mediator between locality and kinship. This is because "food creates substance, just as procreation does, and forms an excellent symbol both for the creation of identity out of residence and for the values of nurturance, growth, comfort and solidarity which are associated with parenthood"(1973: 29).

¹⁶ Here Schneider echoes Needham, who claims the same as early as in 1960's.

¹⁷ This new theoretical wave does not view kinship as an entity in itself. But incorporates the specific socio-historical context, multiple ethnographic voices, feminist concern of gender, body, personhood and renegotiates between the biological and social factors.

CHAPTER- III

ASSISTED REPRODUCTIVE TECHNOLOGIES- THE RECENT DEVELOPMENTS

Life has a very long history but, each individual has a very neat beginning, the moment of its conception. The whole biology of vertebrates teaches us that ancestors are united to their progeny by a continuous material link. The material link being the thread like molecule of DNA. It is from the fertilization of the female cell (the ovum) by the male cell (the spermatozoa) that the 23 maternal chromosomes encounter the 23 paternal chromosomes¹. As the encounter takes place, the machinery of the cytoplasm of the fertilized egg deciphers the genetic information included in the 46 chromosomes. The new being thus begins to express itself² as soon as it is conceived. With the inborn qualities of a new organism it is now capable of growth, development and eventually reproduction.

Reproduction, as defined by the Oxford English Dictionary is 'the action or process of forming, or creating or bringing into existence again'. Thus, it "is the process in which mature organisms, exercise their physical capacity to produce other organisms, thereby regenerating their species"³(Robertson 1991:1). This implies that human reproduction is both a creative and a destabilizing process. It makes people who in turn make up society. It is no doubt a relentless force. As it continuously adds and subtracts people from our life. Thus in a way it obliges us to change our relationship with each other and also with the wider world.

However, inspite of its immense capacity to alter social relations until recently, reproduction has been thought of in a very narrow biological sense. It has been conceptualized as a strictly 'private' affair. It begins with the fertilization of woman by a

man and ends with the birth of a child. All of this occurs within the sphere of domestic privacy. But the fact of the matter is that even if sex is secretive, and pregnancy too to some extent, reproducing people is inescapably public. As this is how society is recreated, the reproduction of people is something over which we can and do exert control. But 'controlling reproduction' cannot be solely attributed to the contemporary reproductive technologies. This is because, from way back in history, the so-called public has shown keen interest in supposedly private affairs. Thus, who has right to have sex with whom or who should be regarded as the son or daughter of whom has been always controlled through taboos, norms, rituals or laws as the case may be.

Though the social organization of reproduction is such an important force in our life, social scientists have unfortunately neglected the aspects of procreation as such. Even anthropologists have dealt with birth in a narrow sense of the term. This is quite striking as other biological process of eating, sexuality or dying have never been solely appropriated by biological or natural sciences. 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. Dialectical materialism takes as its fundamental postulate the need to eat. Karl Marx has transformed this very simple fact of biological necessity into the foundational ground of a theoretical system of enormous vitality. The simple sex act has been transformed by the clinical genius of Sigmund Freud into a theoretical a priori of a system in which libido shapes our consciousness and our world. Death has haunted the philosophical imagination ever since man the thinker brooded over the ontology of beginning and end. In our time it has enormously rephrased 'existentialism', even if some believe that to be "an untidy and passionately pessimistic body of thought" (O'Brien 1981:20).

The inevitability and necessity of these biological events have not exempted them from historical force and theoretical significance. Quite surprisingly, we have no comparable philosophies of birth. There are three basic reasons for this neglect⁴. 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, accidental or 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).

In this conceptualization, reproduction has had two connotations. Either it has a symbolic meaning in theological vision, mostly with a view to depict a passive picture of woman’s body. Or, it has been understood as the principle of who has obligation for whom. In the social guise of kinship and affinity thus reproductive relations became instrumental only in the organization of such matters as the resolution of property disputes and selecting mates. Thus, reproduction has been strictly seen as a family affair, an affair that is the ‘given’ base of kinship structure. This has a double bind. We assume that reproduction is a ‘private’ affair within the network of family and kinship. But, at the same time, it is believed that kinship structures crumble and family is out of business with the onslaught of industrial institutions. Immersed within our understanding of kinship and family, reproduction is lost to sight as an active force in society and history.

Thus, with the bath water of the 'primitive kinship' and modern 'industrial family' the conception of reproduction is drained away as an unimportant 'thing' of the past. To the contrary, reproduction is neither the vestiges of the past nor has residual meaning only in respect to kinship and family. It is rather gaining new meaning and import. This is because reproduction can no longer be seen as a fundamental unalterable fact of life. Moreover, today, it is more and more constituted in the broadening range of 'public' institutions leaving aside the domain of 'private' kinship and family. 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). Thus, it is very rightly claimed by Gupta (2000:54) that:

"Never before in history have the sexual politics of reproduction become such a multi-faceted and controversial issue as in our times, just as never before in history have so many actors such as husbands/partners, the medical establishment, population establishment, public institutions, the legal establishment, pharmaceutical corporations representatives of organized religions, and the State, had vested interests in the issue of human reproduction".

It is however the feminist concern which "dragged reproduction to the center of social theory"(Rapp 2001:466). This is because reproduction provided them a lens through which cultural norms, struggles and subsequent transformations can be viewed.

As, Stacey so elegantly puts it:

"The manner in which a society handles the crucial matters of birth and death and of sickness and health, not reflect, but reinforces the major institutions and values of that society" (Stacey with Homans 1978quoted in Stacey 1985:270)

However, before we probe the matter further (as to question how such reinforcement and transformation takes place) we will try to track down "the highly hybridized theoretical genealogy"(Rapp 2001:468) of medical and feminist anthropology.

REPRODUCTION COMING CENTER-STAGE

It was in the 1970's, that medical anthropology increasingly became a growth pole. This growth was due to the practical and theoretical questions that medical anthropology was addressing regarding the existing social dilemmas. This scholarship has decentred European (or Euro-American) notions not only of the body but also of science and biomedical science in particular. In doing so everyone from Marx to Foucault and Bourdieu has been awarded credit for this historicization, theorization and politicization of body. However, we are also indebted to other social analysts, some of whom are marginally related to medical anthropology or even to social sciences. Here I am referring particularly to feminism. In Susan Bordo's (1992) language it can be said that:

"Formerly, the body was dominantly conceptualized as a fixed, unitary, primarily biological reality. Today, more and more scholars have come to regard the body as a historical, plural, culturally mediated form. To the degree that such a shift has occurred, feminism has contributed much to it, and to the corollary to the development of a 'political' understanding of the body".

The dramatic rise and expansion of international women's movements, which have been virtually coterminous with this period, led to the amalgam of the two sub-disciplinary pursuits. This focus on body were more justified as women were allegedly identified with the body rather than mind; with feeling not thought; with irrationality, not rationality; in short with nature rather than with culture (Ortner 1974). It was the collective achievement of feminists then to have quickly dragged the concept of nature under the microscope and subject it to grueling interrogation. In this endeavour, feminist scholars trained their sights on biomedicine where reproduction – 'the ultimate natural base' came under scrutiny.

Building on David Schneider's (1984) insights into how American kinship uses metaphors of blood and contract to naturalize the biological and social bases of kinship, feminist were quick to link the study of kinship to gender (Yanagisako & Collier 1987). The study of childbirth thus has taken a center stage where biomedical rationality has been analyzed as operating to reproduce old values and order⁵. It is through these multiple theoretical strands that formerly invisible process of 'reproduction' has become more and more visible in public discourse.

NEW REPRODUCTIVE TECHNOLOGIES

Having thus set the stage as to when and how reproduction came to be realized as the active driving force, it becomes easy for us to focus on reproductive technologies. This is because these 'New Reproductive Technologies' are claimed to have an 'revolutionary edge' with which it can change the face of humanity. As the use of new biomedical technologies to assist or 'manage' reproduction has become more routinized, their potential to complicate received ideas and practices demands attention. However, before we delve into the inherent complexities we need to be clear about what is meant by oft used term 'NRT' in general and 'ART' in particular.

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 term 'new reproductive technology' (referred to hereafter as NRTs) refers to the 'new' technologies designed to intervene the process of reproduction in three distinct areas⁶.

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 technology – diaphragms, intra-uterine devices, sterilization, abortion, 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 one of the really ‘new’ innovations in contraceptive technology this century.

A second group of reproductive technology is concerned with pre-natal diagnosis and genetic characteristics. Thus it has extended obstetric services backward into the antenatal period for monitoring foetal development in the early stages of pregnancy. Ultrasound thus became 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). The focus thus subsequently shifted to treat the complications diagnosed by antenatal care. Thus, there came in new techniques for neonatal care and techniques that might eventually enable the modification of inborn defects through genetic engineering. Technologies in this field thus aim at improving the health and genetic characteristics of foetuses and the new born– some say that this is perhaps the search for ‘the perfect child’.

The third and most controversial group is the conceptive technology or the ‘Assisted Reproductive Technology’ (referred to hereafter as ARTs) as it is commonly known. These technologies are directed to the promotion of pregnancy either by aiding

or stimulating conception. Today the field of ART has evolved into a flourishing zone with several specifications for providing 'better' understanding of reproduction and infertility. These conceptive technologies are highly varied. Technologies in this category range from artificial insemination or surrogacy, which can be very 'low-tech' requiring little or no medical intervention—to in-vitro fertilization, synonymous with 'high-tech' medicine involving very sophisticated, medical, surgical and laboratory procedures.

Specific technologies in this category of ART forms the focus of this chapter as this would enable us to understand how they assist not only reproduction but also relationships hence produced. The remarkable advances in genetic technology, however, cannot be fully comprehended without an initial basis in the society's conceptualization of the notions of fertility and infertility. Since the beginning of recorded history, the human race has placed immense emphasis on fertility. The Biblical Commandment: 'Go forth and multiply and replenish the earth and subdue it'; and the traditional Hindu blessing to a new bride, 'May you be the mother of hundred sons' are well enough to portray the importance of fertility. As, Manu, the lawgiver, wrote 'to be mothers, women were created and to be fathers, men' (quoted in Gupta 2000:95).

However, the question arises why do people want children? There are various voices answering this. The voice of religion or public morality may leave a couple with little doubt about their social duty to procreate. The family finds in this a comfortable insurance for old age and at the same time the urge to get their genes into the future generation. To others it is the emotional pleasure of parenthood that counts. Thus most societies can be said to be pro-natalist⁷ and having babies in almost all societies is considered positive.

Against this backdrop, it becomes quite clear that infertility is undesired and a shattering experience for both the male and female⁸. However, it is a fact that infertility was generally believed to be a female condition. Modern research in infertility on the contrary views that sperm defect and dysfunctions are the largest factor responsible for infertility. WHO defines infertility as the inability to conceive after one year of unprotected sex. According to its 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). In India, WHO reports the incidence of infertile women as 3 per cent and that of couples as 10 per cent. Katiyar argues with the help of statistics that “nearly 16 million couples-or 32 millions individuals-in the 18-to35-year age group⁹, are afflicted by the problem, making infertility one of the most widespread conditions in the country”(1993).

Infertility is said to have gone up statistically in recent time. However, throughout history and at every level of society from the individual, to the community and the state, people have had serious concern with infertility. Our 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. The theme of infertility plays an important role in the Hindu epics, such as the Mahabharata and the Ramayana and also in the Holy book of Bible. At the beginning of the Ramanaya, king Dasaratha is unable to impregnate any of his three wives. Ultimately he seeks the help of the sage, who gives Dasaratha some ‘kheer’. After having the ‘kheer’ all three wives get pregnant and Dasaratha became the father of four sons. Can this be seen as one of the earliest examples of non-medical artificial insemination and the ‘kheer’ as a euphemism for sperms?

The Bible also in the first book of Old Testament includes detailed arrangements by which women deliberately conceived children in order to surrender them to families of their 'natural' father. The story goes that Sarah at the age of eighty unable to bear Abraham a child suggested that to have a child by her maid Hagar. He did as he was bid and Ishmael was born as a result. Can we see this as an early example of non-technological surrogacy? Moreover it was even more extraordinary that Sarah was then herself able to conceive when she was ninety. Isn't it to be taken as an example of conception and pregnancy by the oldest postmenopausal woman?

However, moving away from the text¹⁰ I will now focus on Robertson's account (1991). Here, he claims that based on ethnographic studies aphrodisiacs were copiously available in village market place and healers of all sorts offered cures for impotency. This may range from a cup of ginseng tea to such diversions as urinating through one's wife's wedding ring. Certain account record Hungarian peasant women who bite their own afterbirth to continue their fertility; and of Chinese women who are given dried placenta¹¹ "to eat to improve their fertility"(Johnston, DR1963; quoted in Taymer1978: 5). Even in India, as Katiyar (1993) mentions in case of male infertility, the woman can have intercourse with a suitable member of husband's family. This generally was allowed after eight years of infertility or after eleven years of delivering only female children. Other traditional solution were visits to local 'vaidya' (those practicing indigenous medicines), astrologers and 'sadhus' (holy men), conducting havans (fire-rituals), besides using an assortment of herbs, charms etc.

However, though non-technological assisted reproduction can be documented in earlier period, the first known scientific attempts date from 1799. Most of the techniques used in assisted reproduction or artificial¹² reproduction were first used in farm animals

such as cows and sheep. The research in the area of infertility has given rise to an array of technologies—artificial insemination, in-vitro fertilization, egg or oocyte donation, sperm donation, embryo donation, low temperature storage of egg, sperm and gamete and surrogacy. Also techniques such as microscopic tuboplasty are used to help women with tubal pathology to conceive.

Artificial Insemination

Artificial insemination or “gamete transplantation”(Kowles 1985:118) is the manual deposition of semen collected after masturbation into a female’s vagina with a syringe. In that sense it is artificial. Sperm 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. It was John Hunter who was the first to perform artificial insemination with donor sperm sometime between 1776 and 1779 (Taymer 1978). A doctor usually does the introduction of the semen, or the husband or partner, 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’¹³. During one menstrual cycle women are inseminated 3-4 times. The procedure is generally repeated over a period of six months i.e. 18-24 inseminations.

There are two basic forms of artificial insemination. One is artificial insemination by husband’s sperm (referred to hereafter, as AIH). 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 causes. It may be that the thin mucus lining the vagina or the outer surface of the cervix is so strong that the sperm can not survive. The sperm count of the husband may be too low for fertilization and it becomes necessary to be concentrated in the laboratory. However, some women have used AIH

when their husbands were in other countries for long periods of time; or were undergoing radiation treatment for cancer (Kowles 1985: 119).

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. An increasing number of single or lesbian women are also choosing AID to fulfill their craving for a child. According to the infertility specialists, there is a tremendous demand for AID in India also – about 500-600 cases of AID is reported every month (Gupta 2000). Requests for AID are accompanied by appeals for utmost secrecy. Often, husbands do not want their wives to know that donor sperm is being used. Or the other way round – i.e. the women do not want their husbands to know, as very often this becomes coterminous with lack of ‘manhood’. In this way their husbands are not assailed by worries. Sometimes, however, donor sperms are also sought by couples who have their earlier children born with genetic disorder due to defects in the husband’s sperm. In this case, the genetic parent of the resulting child is the woman receiving the sperm and the donor.

Thinking about the possible problems with AID in reformulating kinship concepts, AIH appears to me somewhat unproblematic¹⁴. This is because one can give away sperms but can one give away paternity? Moreover, when the donor is a relative or friend then AID tries to negate ‘incest taboo’ which is the quintessential feature of the kinship system. Still more, as the genetic parents of the child are not married and the mother’s husband’s (in case of heterosexual couple) name is in the birth certificate as the ‘father’ – what we mean by the terms ‘legitimacy’ ‘illegitimacy’ and ‘adultery’ becomes important. There is also the possibility that through widespread use of artificial

insemination, an AID offspring can inadvertently marry a close relative. In this circumstance, even if in law the donor is reduced to that of a complete stranger and a non-relative, how is it interpreted by people themselves? It is in this context that the reshaping of kinship values deserves critical attention.

In Vitro-Fertilization(IVF)

On 25th July 1978, Louise Brown was born in a small town in Oldham, Lancashire England. This made sensational news, as Brown was the first 'test-tube baby'. This is often attributed as the starting point IVF. However, it was ten years earlier that two determined men came together and realized that the concept was feasible. In a historic meeting held at the Royal Society of Medicine in 1968 Patrick Steptoe demonstrated clear laproscopic pictures of ovaries and follicles for the first time in London. After the lecture, Robert Edwards, who had been in the audience, came to talk to Steptoe in the foyer and this marked the start of their historic collaboration (Gardener *et al* 2001).

This was, however, the result of several previous trial and errors attempts to overcome sterility in rats, mice, rabbits beginning from 1890 onwards. Though it was not until 1959 that the first IVF animal (rabbit) was born in the United States, it was only after two decades that Louise Brown came into this world. Since then the technique known as IVF has become a standardized practice and has resulted in new insights into gamete interactions in early embryonic development. In India also IVF gained momentum soon after. Durga Agarwal, born on 3rd October 1978, was hailed as the first Indian 'test-tube baby' and second in the world. But her claim to birth through IVF was contested, leading to the suicide of Dr. Subhas Mukherjee, the doctor who claimed credit for it. Thus, Harsha born in 1986, under the supervision of Dr. Indira Hinduja is claimed

to be India's first scientifically documented 'test-tube baby' (Hinduja *et al* 2001). Today a number of centers have started extending ART services in remote corners of the country. These services are increasingly offered by private clinics as few government hospitals provide them. According to the *Outlook* 'C fore' survey (2002) the first five fertility clinic in India are:

1. Institute of Reproductive Medicine, Calcutta
2. Jaslok Hospital and Research Center, Mumbai
3. Ghosh Dastidar Institute, Calcutta
4. Inkus IVF Center, Mumbai
5. Malpani Infertility Clinic, Mumbai.

At the moment technologies in the field of AR may statistically affect only a small number of people. But they are proliferating at a very rapid pace. The data shows (*Outlook*, July 2002) that at Dr. Baidyanath Chakraborty's Institute of Reproductive Medicine there is an overflowing of patients – 300 a month being the current average.

However, what do we scientifically mean by IVF? In- vitro means "within glassware". In-vitro fertilization (IVF) is fertilization outside the body, in a test tube or petri-dish. The procedure begins at ovulation, when a physician uses a laproscope¹⁵ to collect freshly released egg cells. Various hormonal drugs (like clomiphene citrate and others) can be used to hyper-stimulate the ovaries, to time the ovulation conveniently or to induce multiple ovulation. The captured egg (or eggs) is then put in a glass dish and properly treated sperm cells from the woman's husband or a donor are added. If this step is successful, fertilization occurs.

Twelve hours later, the fertilized egg is transferred to a second dish. There a nutrient medium supports the first few cleavages of the zygote. In two days, the zygote is

an eight-celled embryo. Shortly thereafter, the physician collects the embryo with a little of its nutrient fluid and flushes it into the woman's uterus. It is here, where the small embryo implants. 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). Recent advances in freezing and storage of sperm and ova made different variations on the IVF possible. Gamete Intrafalopian transfer (GIFT) and Zygote Intrafalopian Transfer (ZIFT), IVI (Intra- Uterine Insemination) has soon followed the advent of IVF. It is a potential treatment for the many different types of infertility. It represents the only realistic hope for a couple to have their own genetic child when the wife has absolute tubal disease (bilateral absence or irreparable obstruction of falopian tubes). However, women who have undergone surgical tuboplasty also undergo IVF treatment. Though it started with assisting women with tubal defects, it is today seen as the only way out for most male infertility also. The male factors can be traced as low-sperm count, endometriosis and unexplained infertility.

However, none of these techniques cures infertility and the success rate is as low as 5-22% per cycle (Gupta 2000:363). This means 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. IVF is the most complex of ART, and as such it has many long and short-term health risk. The drugs used and the procedure itself have much pain and suffering to the woman who undergo it. Even if the treatment is successful, there is much more chance of a caesarian section and multiple birth, both of which run higher health risks (Zalewski 2000). Moreover, in-vitro fertilization involves a large wastage of embryo, thus raising the question of moral, ethical and legal dilemmas. Though no apparent socio-legal ramifications are posed by IVF with an egg and sperm of a married couple, it no doubt separates the physical dimension of intercourse. It can be said

“procreation becomes reproduction (in the mechanical sense) and turns the marriage bed into a chemistry set” (Andrew 1984:408). This somewhat redefines marriage, the most basic function of it being legitimizing sexual intercourse and begetting children. With either egg or sperm donated, the matter become far more complex and it is governed on the same lines as AID. Thus, IVF with a donated egg or sperm, or womb leasing will create two to three sets of parents, genetic, biological and natural- and calls for a critical evaluation.

Sperm And Egg Banks

Cyropreservation, that is freezing, has made it possible for sperm to be stored for long period of time. Donors are screened, so as to rule out infections. Donor semen is classified according to skin colour, colour of eyes and hair, height as well as IQ level. In some places educational background and religious affiliation are also noted. The first sperm banks were set up around the end of the 1960s in the US for men who had to be sterilized, and for astronauts who were afraid of becoming infertile. The most famous and controversial of the many sperm banks in US is the ‘Repository for Germinal Choice’ in Escondido, California, established by Robert K Graham in 1980. It is also called the Nobel Sperm bank, because it is said to harbour ‘smart sperms’ – the sperms of several Nobel laureates and young scientists reported with IQs between 140-190. Its aim is to inseminate carefully selected women thereby increasing the number of exceptionally bright children in the population. 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). Since 1985 the perfection of the technique of freezing and thawing has made it possible for women’s egg to be stored as well.

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 liquid nitrogen. Thus, in spite of the WHO regulation, which discourages use of fresh semen, (due to anxieties of sexually transmitted diseases) –this, is becoming the only source. There is some controversy about when the first sperm bank in India was started. Dr Geeta Pandya claims she started the first one at Jaslok Hospital in Bombay in 1974. The Malpanis started a sperm bank in 1990 and got their first six donors through an advertisement in the newspapers. There are 3-4 semen banks in Delhi as well, but they supply fresh semen. Usually one ejaculate of sperm is used to inseminate a maximum of three women. This measure is in a way to prevent incestuous relationship later on. However, it is often the dearth of donors that compel doctors to use the same donor to inseminate a large number of women (Rai 1994). This raises similar conceptual and practical dilemma in kinship formulation, just like those raised by the application of AID. What makes the use of frozen semen, a special case in discussion– is that it even problematizes AIH. It invents new dilemmas about succession and inheritance, when widows are fertilized by their dead husband's frozen sperm. The question arises: should succession order be birth order, or the order in which sperm was produced by the husband, given that this technique conceptually separates the two (Parkin 1995)?

Egg Donation

Oocyte or egg donation is now becoming an accepted form assisted conception treatment. It offers an opportunity for a selected group of patients to achieve pregnancy and a live birth. This group includes women with premature menopause, women who are carrier of genetic diseases, women who have had recurrent failures of IVF treatment and older women. Trounson reported the first pregnancy in a patient after transfer of a

donated oocyte fertilized in-vitro in 1983. The following year also saw the achievement of pregnancy in a patient with primary ovarian failure (Marcus and Brinsden 1999: 343). Although oocyte donation should parallel the donation of sperm, the former is clearly different from the latter. The donors, in this case, receive drugs for super ovulation and are at risk of developing ovarian hyper stimulation syndrome, in addition to the risk of oocyte recovery.

Hence in many cases, the donor is a sister or close friends who wish to donate the eggs. There, however, arise significant complications with known donor, as the child's aunt will be his/her genetic mother. This may also result in psychological stress for the donor as the donor treatment ends abruptly and the entire attention shifts towards the recipient. Moreover as the donor and recipient become extremely supportive of each other, the traditional heterosexual dyad fails to operate. The latest developments in this field include the possibility of taking eggs from an aborted fetus which is said to contain about three to four million eggs. This number, however, goes down to one million at birth. The problem of begetting children from a mother never born is not only mind-boggling but raises serious social, familial implication.

Embryo-freezing And Embryo Donation

Leeton reported the first pregnancy after transfer of a donated embryo in a patient with primary ovarian failure (Marcus and Brinsden 1999: 355). Now, embryo donation is a well-established and successful form of ART where both partners are sub-fertile¹⁶. In a typical cycle in IVF, six embryos are created. A maximum of three embryos can be transformed per cycle. The remaining three embryos can be handled in four ways. It can be donated to research, discarded, donated to infertile couples, or cryopreserve for future use. Embryo donation achieves pregnancy and life 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. When only one or two embryos are available for transfer to a recipient, some clinics may mix embryos from more than one donor. This enables more anonymity and higher chances of pregnancy.

What is unique about embryo donation is that the child will be born to a couple who has no genetic tie with him/her. Moreover in case of mixed embryo, determination of genetic material if not impossible becomes cumbersome. This is in contrast to any other form of ART as the link between the genetic mother and the social mother is completely severed. In case of embryo preservation, in addition to this, what comes as sociological interest is the fate of stored embryos at the death and divorce of couples and hence the ownership of the unclaimed ones.

Surrogacy And Embryo Transfer

There has always been confusion on the definition of different forms of surrogacy. It is 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 rather than who gives birth is the surrogate. 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. 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 2001). 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 her own and she also provides her uterus.

The arrangement of surrogacy are referred to those who have no uterus, suffer recurrent abortions or are under certain medical conditions which would threaten the life of the woman were she to become pregnant. The treatment process is itself straightforward. In normal stimulated IVF cycle, embryos are frozen and then transferred to selected surrogate host. The process can also go with fresh embryos, created from freshly collected oocytes fertilized with sperm that has been quarantined for the statutory six months. However, like that of semen, oocyte and embryo donor surrogate host can come up with altruistic or altruistic motive. The first can be exemplified by the act of 48- year old South African lady, Pat Anthony (cited in Gupta: 2000). She became known worldwide as the surrogate grandmother when she gave birth to triplets in a Johannesburg clinic on 1st October 1987. She conceived from her daughter's egg and son-in-law's sperm. Pat, thus, became the first oldest surrogate to give birth to triplets and also the first woman to give birth to her own grandchildren. This historic event, however, brought in a plethora of issues as it shattered the existing meanings and brought in new connotations. Thus leaving us in a world where we don't mean what we say.

Commercial surrogacy, however, came up with a controversy of a different tone. While commercial surrogacy first came to news with Baby 'M' case in 1986, India witnessed an uproar when thirty year old Nirmala, announced her decision to bear a child for her boss for Rs 50,000 (Srinivasan 1997). IVF surrogacy is yet to gain ground in

India with only an estimated 0.05 per cent of the infertile population in the country going in for this procedure. The Delhi IVF Center, which claims to be performing half the surrogacy cases in the Capital, has undertaken only five such cases over the past eight years. "Not many women are eager to lend their uterus. Only close relatives like mothers, sisters or even sisters-in-law of the woman are seen to have come forward in India," (ibid.) explains Dr Anoop Kumar Gupta, Medical Director and Infertility Specialist of the Delhi In-Vitro Fertilization center. "Since there is no formal legislation we do not allow commercial practice of surrogacy as it happens in the West,"(ibid.) he explains. However, ova are often bought and sold. The doctors further had the feeling behind the apparent altruistic arrangement money or property could have changed hand.

This very act of surrogacy, whether altruistic or commercial gives rise to a series of complications as it 'bypasses' nature. It is compounded by complex and messy social and psychological ramifications stemming from the unprecedented social and historical relationship between the gestational carrier, the biological parent and the child. This is because it does not conform to known patterns of predictable behaviour and no language exists to describe the human and social relationship that it creates. Are the sperm donor, egg donor, hired surrogate and the man and woman who pay the expenses to get the child equally 'parents'? What is the relation between the biological father and the surrogate host in case of partial surrogacy? What is the relation of the child to the surrogate mother's husband and her children? We may even try to describe such ties in biological terms. But this language will not do justice to the social and psychological perception that governs human and social interaction.

However, this encounter to deal with new ART will remain unfinished without the legal comments on the issue. Concerns about the legal aspect of ART are part of the

continuing public and professional discussions about what our societal policy towards these technologies would be. The formalization of social rules by means of legislation represents the full extent of the concern about a particular social topic. The earliest expression of such concern usually takes the form of ethical debate. In most situations a progression from ethical debate to legislation does not occur because social concern is insufficiently strong to provoke such initiative. However, some topics do provoke a demand for legislative control. The creation of children by a 'anonymous third party' was such a topic (Snowden 1993). Recommendations were made for the regulation of in-vitro fertilization, donor insemination, surrogate motherhood and experiments using human embryos. The 'Warnock Report'¹⁷ (Chadwick 1987:7) acted as the basis for the legislation contained in the Human Fertilization and Embryology Act 1990 in UK.

The Act is wide ranging and deals with a number of topics. It is only those which have direct references for the present study is outlined:

1. Setting up of an independent Human Fertilization and Embryology Authority to control and license centers.
2. Account must be taken of the welfare of any child who may be born as a result of treatment (including the need of the child for a father).
3. Written consent must be obtained from both the donor and the recipient and both might be advised about their right to withdraw such consent.
4. The woman who receives the sperm and who carries the child is deemed to be the legal mother of the child.
5. In case of oocyte donation, the recipient woman and her husband are legal parents and responsible for the child even he/she is born handicapped.

6. The woman's husband or partner is regarded in all respect as the child's father unless it is shown that he did not consent to his partner's insemination.
7. The authority must keep records relating to names of donors and the resulting child.
8. The child has a right to receive certain limited information at the age of 18 (or earlier in some circumstances) but this does not include the right to 'know' at any point of time.
9. No money other than expenses approved by the court must be paid.
10. In case of surrogacy, application for adoption must be made within six months of the birth of the child.
11. The courts under certain circumstances have the power to demand the name of the donor from the authority.

Similarly in USA Ethical Considerations of the New Reproductive Technology was brought forth in 1986 by the American fertility Association. Since then a number legislative bills have been introduced (see Dickens 1999). An account of the worldwide legislation (Cohen *et al* 2001) however focuses on the fact that in India there is no such law on AID or IVF and no body of experts to supervise the ethic of business or to certify the institutions. A few states have passed laws requiring clinics offering infertility services to register themselves, but there is no body to monitor the quality of services provided. In India thus though there is a wide ranging practice of AID, IVF, surrogacy, embryo transfer, sperm and oocyte donation, there is neither guidelines nor laws. The fact that surrogacy is still in its infancy also means that there are few guidelines monitoring its use. The hospitals do not perform surrogacy cases due to lack of legal guidelines in the country. "Surrogacy has deep social implications, but there are no

formal legislations,” says Dr. Subramanian, a senior Urology and Andrology consultant with the Indraprasth Apollo Hospital (<http://www.tribuneindia.com>).

However the case of Nirmala not only sparked off a controversy but initiated a long due revision of ethical criteria in medical matters, which were revised, after 17 years. A ‘Statement of Ethical Considerations involved in Biomedical Research on Human Subjects’, or the ‘ICMR Code’ (Rana 1998) was drafted by the Central Ethical Committee on Human Research of the Indian Council of Medical Research under the chairmanship of the former Supreme Court Chief Justice M.N. Venkatachalaiah. The ethical guidelines now also encompass developments in the field of human genetics, organ transplant (including foetal tissue transplant) and assisted reproduction technology (ART). Regarding IVF-ET the ethical committee experts arrived at the following consensus (ibid.):

1. Surrogate motherhood should be legal only when it is coupled with authorized adoption.
2. It should be presumed that a woman who carries the child and gives birth to it is its mother.
3. The intending parents should have a preferential right to adopt the child subject to six weeks post-partum delay for necessary maternal consent.
4. Surrogate motherhood should be legal only on certified medical indication.
5. Abortion under the law on medical grounds should be an inviolate right of the surrogate mother and the adopting parents have no claim over the amounts already paid in the surrogacy contract.

According to the Committee, a child born through ART is presumed to be 'the legitimate child of the couple having been born within wedlock, with the consent of both the spouses and with all the attendant rights of parentage, support and inheritance'. Further, a 'sperm or ovum donor should have no parental rights or duties in relation to the child and their anonymity should be protected'. However, while the draft of national guidelines for Accreditation, Supervision and Regulation of Assisted Reproductive Technology (ART) clinics in India by Indian Council of Medical Research (ICMR) had created a furore in the gynecological fraternity across the country, the modified version of the draft has also come as a disappointment. The modified draft, or so to say the first official draft, has been released for public debate by the secretary, Family Welfare, Ministry of Health and Family Welfare, on September 4, 2002 (www.indianexpress.com). Even after a volley of protests from experts to alter certain sections of the guidelines, the only noticeable change that has been made in the draft is protection of the identity of the donor of sperm or egg, in case the offspring wants to know the donor after 18 years of age. The other two minor changes are in the requirements of ART clinics and the minimum qualification necessary for an embryologist working in an ART clinic, only when the clinics are existing one year prior to the finalization of the guidelines.

With an endeavor to monitor the mushrooming ART clinics in the country, guidelines have been drafted by a team of 19 experts selected by the ICMR, New Delhi, in collaboration with National Academy of Medical Sciences, New Delhi. The committee comprised seven gynecologists, one lawyer, and two members from the ministry of health and family welfare, and embryologists and biologists of ICMR. The draft of the guidelines available to a select few gynecologists in the country, some six months back, drew flak. Experts have severely criticized a few sections and clamoured for modifications. Sec 3.3.5 was criticized for prohibiting related donor of egg/sperm

and section 3.10.6 for forbidding surrogate motherhood by friends or relatives. Experts felt that these two sections would trigger a vicious cycle of commercial donation. Dr Gopinath Shenoy, ex-member consumer court, said, "The guidelines would only give legitimacy to commercial donation clandestinely conducted by most ART clinics" (www.indianexpress.com). Voices of protests were raised against Section 3.3.6, which stated that a child has the right to track down donors. Section 3.3.7, which stated that an ART clinic would have to keep a record for at least four decades, was also assailed for being too cumbersome.

Aggrieved by the draft, 23 ART clinics in Mumbai, registered with Mumbai Obstetrics and Gynecological Society (MOGS) formed a consortium and submitted proposed modifications to ICMR. The catalogue of requests was put forth to include related donor, related surrogate motherhood, to change the requirements of ART clinics amongst a host of other requests in the guidelines.

However, what has come as a major disappointment is the 'minuscule changes' made in the draft. Now, section 3.3.6 states "all information about donors, recipients and couple must be kept confidential and secure by the ART clinic. The information about the donor (including a copy of the donor's DNA fingerprint if available, but excluding information on the name and address-that is, the individual's personal identity) should be released by the ART clinic after appropriate identification, only if asked by him/her after he/she reaches the age of 18 years, or as and when specified and required for legal purposes, and never to the parents (excepted when directed by a court of law)" (*ibid.*). Dr Hrishikesh Pai, consultant gynecologist, Lilavati hospital, agrees that a few modifications have been made. However, he felt that the guidelines must be made more flexible. "The guidelines are more consumers friendly than doctor friendly. We are disappointed that ICMR has not included related donation of egg or sperm and related surrogate motherhood" (www.indianexpress.com). Dr Aniruddha Malpani, Malpani

Infertility Clinic, says that the “guidelines were earlier ridiculous and now they have become a little less ridiculous. We want a dual approach about donation, whereby patients are given a choice between registered and non-registered donors. The guidelines are extremely westernized and are impractical for India”(www.indianexpress.com). He insisted that advanced techniques like assisted hatching and embryo biopsy be included. Dr Nandita Palshetkar, opines “It is impossible for us to keep a record for 40 years. That is too cumbersome. We want a simpler and less cumbersome process” (www.indianexpress.com). To which president of FOGSI, Dr Usha Saraiya adds, “It is ludicrous, if they do not permit related donor and related surrogate motherhood”(www.indianexpress.com). The litanies of complaints are endless.

Gynecologists are all geared to press for these amendments with renewed zest. According to sources, a representative of FOGSI is going to meet ICMR officials at Delhi to pursue the matter further. Even MOGS would once again get pro-active to press the issue, said a MOGS member. Experts are however apprehensive about the changes that ICMR would make. “We have tried our best to convince the ICMR to change few sections, which it did not heed. I doubt whether ICMR is really interested in our suggestions. The draft is put on the ICMR web site (www.icmr.nic.in), but should not ICMR bother to inform doctors about the draft either through advertisement or press conference. That shows that they are really not looking forward to suggestions,” says Dr Malpani (www.indianexpress.com). The Indian Association for Human Reproduction and the Federation of Obstetric and Gynecological Societies of India (FOGSI) are also in the process of formulating some recommendations for legislation.

In the light of the above discussion, the inadequacy of our laws and their judicial interpretation are no doubt exposed. But, at the same time the growing concern with this “vacuum”(Parikh and Jerome 2000) in the sphere of medico-legal issues indicates that the use of ARTs are more and more becoming a routinized affair concerning the entire

population. What more, it calls for a sociological understanding of the situation. The present study will trace what it means to be one's parents, one's child, or even one's relative for that matter. In order to do so it will focus on how these changes have affected kin relations in the west (Strathern 1992; Franklin 1997 and others). In this light the effort is to look for whether kinship relations in India will also undergo modifications? And as such, how far do ARTs have the potential for bringing in far reaching reconceptualizations in the existing domain of family and kinship relations.

NOTES:

¹ Each segment of the DNA, which is roughly a meter long ribbon, is carefully coiled and packaged in the form of a little rod, visible under the microscope, the chromosome.

² The pronoun 'itself' used for the fetus is not a deliberate step to enter in the debate-of 'fetus-as-being'. Rather it is used to be gender neutral.

³ In contemporary social science reproduction is used in its most general usage. Often meaning something very abstract-like 'reproduction of ideas', 'reproduction of labour' etc.

⁴ Here though, I follow Robertson in tracing the first two reasons regarding the neglect of reproduction in social theory; I would like to add upon a third following Mary O'Brien (1981). She sees in this neglect a tyranny of knowledge system.

⁵ These works crisply intersected feminist science studies where biomedicine has been criticized as a patriarchal, male ideology.

⁶ 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.

⁷ Although at any particular time in history the state may have ante-natalist policies, either for the whole population or differently for various groups in particular society.

⁸ Infertility here is understood as the inability to conceive. It does not include those who consciously choose to be childless. Neither does it in any way proclaim my individual judgement that every man or woman must conceive and failing to do so should invite social stigma..

⁹ However, the prevalence of infertility is very difficult to access. As it is compounded by various social, cultural and political determinants.

¹⁰ As these might, to some, appear to be just holy books and would not be taken as authentic history.

¹¹ Placenta contains gonadotropin one of the hormones used in present day treatment of ovulatory failure.

¹² However, Yoxen would abandon the word artificial. He questions whether "it is useful to speak of natural and unnatural reproduction, given that all these possibilities are just variations on a basic form, and all rely on 'natural' processes like fertilization, development and birth"(1986:6). So does Snowden (1983;quoted in Overall 1987:137). He views all of human reproduction may be said to be artificial in so far as it is socially structured.

¹³ 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 friend or person known to them. It may however, come from request placed through women's magazine.

¹⁴ However, Roman Catholic Church sees artificial insemination as altogether problematic since it involves masturbation and separates the 'inseparable' sex and reproduction.

¹⁵ A device equipped with a viewing system and a suction tube that can be inserted through a small abdominal incision to reach the ovary.

¹⁶ It is most applicable to menopausal women with sub-fertile partners.

CHAPTER - IV

ARTs AND KINSHIP-EMERGING CONCEPTUAL ISSUES

The new genetics has spawned diverse manifestations for society that may match those spawned by the discovery of fire. This new metaphoric fire has the potential to do and undo existing social relations. Quite the most remarkable and unexpected effect is its impact on the “language” of social relationship and categories of people (Yoxen 1985; Strathern 1992a&1992b) that it refers to. In fact an argument could be made that the NRTs have done more than anything else to call into question our traditional understanding of family and kinship. This is because all kinds of familiar terms no longer work in situations, which were once quite appropriate. This is far from being trivial. It is an immensely valuable sign that some kind of cultural adjustment has already begun. It is in the search for such constant negotiations, to establish and disambiguate kin relations that the present chapter devotes itself to accomplish. It is our quest to understand how infertile men and women, couples, practitioners and ‘third party’ reproducers (egg and sperm donors, surrogates), with the help of medical techniques, laboratory standards, psychological screening, and rapidly evolving laws, take on this work. We will try to trace, in the following pages, how certain bases of kin differentiation are foregrounded, while others are minimized.

It is no doubt that until recently most of us were appraising things second hand. It was either from the outside by heresy or reading others’ reports. However, the rate of diffusion is very rapid. It is such that within a few years many of the possibilities will have impinged on the experience and daily lives of families in the country as well. At this point the dilemmas described in public discourse suddenly come closer to home. This calls for a timely

understanding of how NRTs are shaping and reshaping our beliefs about 'kinship'. This is because kinship in the context of NRTs does not concern itself with merely "new ways of making babies". It includes much wider set of issues. Such as, how knowledge is produced and how identity categories are transformed. As Hayden writes:

"These different arenas [of biotechnology] form part of rich narrative field in which ideas about kinship, nature, and culture are woven together in complex and historically dense ways. That these discursive ricochets continue to be elaborated is not a matter of epistemological self-replication, but a result of concrete instances of cross-pollination through which biologized constructions of our reproductive pasts and futures are powerfully articulated and refigured" (1998; quoted in Franklin 2000:319).

It is not uncalled for to mention here that we will differ from Parkin (1997) in our basic assumption. Parkin claims that at present, dilemmas produced by IVF and other related technologies only emerge as "a problem for the essentially Western societies that have developed them rather than other societies in the world"(1997:126). Quite to the contrary IVF was reportedly developed in Bombay before the birth of Louise Brown and is now widely practiced. This encounter to understand is, however, inspired by the writings of Marilyn Strathern (1992a&1992b), Sarah Franklin (1992&2001), and their colleagues. All of them focused on the role of reproductive technologies in complicating naturalized linear cognatic descent and in reinvigorating the study of western kinship.

However, before we interpret the Indian context along these lines, it becomes mandatory to caution ourselves of Schneiders' (1964,1984) warning that the notion of kinship is not fixed but is in constant flux. In this context it is desired first to take on what Indian kinship formulation has to offer us. However, this becomes an unmanageable construct to deal with at this conjecture. This is due to implicit local cultural variations and marked regional

differences of the concept of kinship. Hence I would rather focus on a particular regional construct: the Bengali kinship¹ culture in the first section of this chapter. However, the choice of Bengali kinship is in no way to connote the expression that it is 'the' case, but is merely used just as an example, and the analysis of any other regional kinship structure would have sufficed. The focus on the kinship literature of a particular domain will give us a bird's eye view of what Schneider calls the 'domain of nature' (substance) and 'domain of law' (code). Thus we will have a clear understanding of a set of questions. Whom does a term refer to? Whom does it include and exclude? This in turn will give us a better perception of how much NRTs have the potential to change existing relations and redefine it. We will delve into this aspect, in the latter part of this chapter.

KINSHIP IN BENGAL

Our understanding of Bengali kinship will be based on two well-known accounts of Bengali kinship. These are namely '*Kinship in Bengali culture*' by Ronald Inden and Ralph W. Nicholas (1977)²; and '*Kinship and Ritual in Bengal*' by Lina Fruzzetti and Akos Ostor (1984)³. In view of Schneider's contribution one can no longer attribute genealogical or any other content to the study of kinship. With this idea in mind the attempt was to understand how symbols are connected and how Bengalis use them to define relationships. 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"(1968:1). In following Schneider's substance and code dichotomy, the authors viewed that these two features also define Bengali kinship⁴. However, "there is a fundamental difference between the ways in which Americans and Bengalis connect the two". This led them to talk of "substance-code"⁵(Inden and Nicholas 1977:xiii).

Kinship for Bengali Hindus is premised upon 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 substance-code, which are thought to be inseparable from one another. Thus the code of conduct (of a particular clan, family, or sex) is thought to be imbedded in the bodily substance. This is shared by persons of each genus and is inherited by birth. As a consequence of this cultural premise, no distinction is made between an order of 'nature' (defined by shared biogenetic substance) and an order of 'law' (defined by code of conduct). Thus in Bengali culture there is a single order of being. An order that in western terms 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). Thus the shared body is the substance for the jati class of relations containing an inherent code i.e. sharing. Similarly, the substance for the kutumba class is the given or accepted body and the inherent code being gift-giving. One apparent implication of this monistic worldview is that the opposition between the coded substances can be invariably resolved. 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). However persons related by bodily substances are also related by non-bodily substances. Thus persons belonging to same jati are also related by non-bodily substances conducive to prosperity (food, wealth and land). 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 an enduring interminable 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 as when asked to provide definitions of "ones own people", Bengalis commonly told:

"[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)⁶.

Thus it can be said that an attiya is a person with whom we "share something"(Fruzzetti *et al* 1984:85). This is no doubt maddening. But at the same time it is significant to understand what does it means 'to be related' in Bengal. It thus helps us to look at the simplistic opposition of social/biological ties in a new light. This is because the residual set of 'ones own people' is indefinite and open ended. It can even include people from different castes⁷. However, to describe any of the person of the attiya sajan class as 'fictive – kin' is to go against the ideology of Bengali kinship.

Bengalis classify their own people not only as attiya – sajan and jati - kutumba but also as persons of a particular solidarity unit. These are referred to with 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 are refereed to as sagotra. " A gotra is a clan like unit defined not by shared bodily substance but by a shared name, the name 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 offsprings 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. However wife alone is not regarded as the man's minimal family. In order to perpetuate the *kula* he should be a father and genitor (*janaka*); and his wife mother and genetrix (*janani*) of at least a son. His family may also include their other sons and daughters who are brother and sister to each other. This set of eight relationships is regarded as encompassing the closest bodily relationship among 'one's own people'.

From here we move on to ask, what then are the defining features of the *jati* set of kinsmen? The term *jati* is synonymous with the terms *eka-deha* (same-body), *eka-sarira* (same-soul) and most importantly *sapinda*⁸. The most famous definition of the *sapinda* relationship occurs in *Vijnanesvara's Mitaksara*⁹. It states that:

"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. Likewise, here is a shared body relationship with the mother's sisters and mother's brothers and with the father's brothers and father's sisters by virtue of connection with portions of the same body. So, too, the wife comes to have a shared bodily relationship with the husband by virtue of their reproduction of the same body. Similarly, the wives of brothers also come to have a shared body relationship, the one with the other, because they have the relationship of reproducing the same body with those men reproduced from the same body" (quoted in Inden & Nicholas 1977: 13).

This definition thus encompasses not only *jati* but 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 strongly with the categorization of consanguines and affines in Euro- American culture (Inden and Nicholas 1977; Fruzzetti *et al* 1984).

In defining kutumbas the Bengalis state, “they 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. Once again it may seem that the kutumba class coincides with the Americans class of relative by marriage or ‘in law’. However no doubt, the persons included in the set do coincide to 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 become his children’s attiya in succeeding generation. Thus, my father’s kutum are my ‘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 sapinda, the blood relatives on one’s mother’s side are also excluded from marriage.

This also highlights the difference between marriage of a daughter to that of a son. On her marriage quite evidently the woman becomes her husband’s people. The reverse is not true. It is only that her husband becomes her father’s attiya as the “linking relative”(Fruzzetti *et al* 1984:90). Thus the reason why kutum category does not cut off at the point of what seems at the first sight an American like marriage connection deserves mention. So does the question why jamai (daughter’s husband) and bouma (son’s wife) relationships appear peculiar from every direction?

What then becomes obvious is that the defining feature is not marriage alone. 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 and is still 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. Thus 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).

Thus, what appear is that all three classes – consanguines, affines and fictive kin belong to the encompassing class of kinsmen or relatives. 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). In contrast to this established notions what is put forward is an understanding of the fluid boundaries of substance-code, as essential. Since substance enjoins¹⁰ code consanguinity, affinity and fictive kin do not stand in opposition to each other. Rather they form a continuum in which overlapping of categories takes place. However, this is not to deny that the "usage pattern"¹¹ of Bengali kinship terminology places greater weight upon bodily than non bodily relationships and on shared rather than on given and accepted bodily relationships"(Inden and Nicholas 1977:91).

Having identified the relationship between substance-code (biology-social), we turn our attention to the cultural story of conception and transmission. In the context of our concern with NRTs, this becomes important. We will try to locate, what is passed from parent to child? What each parent contributes in bringing the child? And, how this affects the child's place in

the family. The symbols, which are built into and are manifestations of such relationships also becomes important. Precisely the complementarity of male-female construct as originator of an issue; and the concomitant symbols of sarira (body), sukra/bij (semen/seed), garbha /kshetra (womb/field), becomes our central focus.

The body is the central symbol of kinship in Bengali culture (Inden and Nicholas 1977). However, it is not thought to be static and unchanging. It is rather continuously transformed through out life by a series of symbolic actions (samskaras). In spite of considerable variation, all revolves around a paradigmatic action, birth. It is through birth that the person attains his/her body. Recalling Schneider Inden and Nicholas believe that "birth stands as the central symbolic act in Bengali kinship, just as sexual intercourse stands as the central symbolic act in American. And, like sexual intercourse in the American symbolic universe, birth symbolism in Bengal is suppressed; it is a latent paradigm for many other symbolic actions"(1977:91). Taking cue from Shneiderian axiom, thus these authors draw a parallel, where birth symbolism of Bengal replaces the central symbolic act in America i.e. sexual intercourse. However, they infer that "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).

Marriage is invariably the first samskaras in every Bengali list, even though it is the last to come. It involves a 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'. 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. However, they are not unrelated in any absolute sense. On the contrary, at the level of caste, shared body must

relate them. 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.

Thus, the groom is referred to as *patra*, meaning vessel. And the bride is *patri*, meaning one who 'establishes, installs vessel' (Fruzzetti *et al* 1984). However, the most common reference to marriage is in terms of a field and seed in the field¹² (Inden & Nicholas 1977; Fruzzetti *et al* 1983, 1984; Dube 1986). 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 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 (*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*). The marrow in a male person turns into semen. In a female it turns into uterine blood. 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', thus highlighting the 'monistic' conceptualization of substance-code.

In intercourse (*sangam* or 'union') the husband's seed is received and accepted by the wife in her womb. The sexual intercourse is referred to only in most allusive terms. 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 (*garbha*) in the stomach

of the genatrix. The seed is produced in the bone marrow (majja) of men, and 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: skin, flesh and blood. Even after birth, the mother ‘increases’ the child’s blood and strengthens his bones by her milk. In addition to blood, mother and father pass various qualities (guna) to the offspring. The mother contributes ‘matrisakti’ (Fruzzetti 1984:109) to the offspring. The sakti, a combination of power, force, ability and effect, is shared by all the children. The chapter on ‘sharirasthamam’ (embryology and anatomy) in Charaka Samhita contains a detailed description of the specific contribution of the two parents:

“the embryo is not born of the mother, nor of the father, nor of the spirit, nor of the concordance, nor of the nourishment. Nor is there a mind which is the connecting agent...for the embryo arises from all these factors acting together.

In one sense, the embryo is born of the mother also... we shall now enumerate the mother-engendered parts of the embryo, that is, those which pass to the embryo during its formation from the, mother. These are the-the blood, the flesh, the umbilicus, the heart, the cloman, the lever, the spleen, kidneys, bladder, pelvic colon, the rectum.....

In one sense the embryo is born of the father also... We shall now enumerate the father –engendered parts of the embryo, that is those that pass to the embryo during its formation from the father. These are the hair of head and beard, nails, hair of the body, teeth, bones, veins, arteries, and semen”(cited in Dube 1986:35).

The 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). This complementarity is noticeable at all levels¹³. In the creation of the child the mother compliments the father at every step. She

strengthens the child's bones and increases his/her flesh. The child is born through the father (bap diye janma) and is given by the mother (janmadatri). These sets of encompassing and encompassed relationships are together linked to, and encompass a third unit. This is the fruit (phol), the child in the womb. "Male is not opposed to female here, rather the former encompasses the latter in a hierarchical relationship" (Fruzzetti *et al* 1984:109). The child is born out of a male line, carrying that male line, sharing the parents. Thus, the mother though shares her own blood with her father, but the blood of her children will be that of her husband. 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 complementarity¹⁴. Though, it would be easy to talk of blood as mere substance and then go to on 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) remains where gotra, bangsa, satpuruṣ relationship cease. Thus the core substance of kinship in local perception is blood and the major constituent of blood is food.

However, the Bengali conceptualization of this particular metaphor has its roots in Vedic literature, in the law books, and more profoundly in the great epic, *Mahabharata*. The most important among the law books, *Manusmṛiti*, 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. Without going into the complexity of the argument we may refer to what Tambiah says on the authority of *Manusmṛiti* (x, 69, 71, 72):

"an underlying distinction which acts as an axiom in the explanation of mixed marriage is that between male seed and female field or soil in the theory of conception. It is declared that between the two, the male seed is more important, but not exclusively so for 'seed sown on barren ground perishes in it', while 'good seed springing up in good soil, turns out perfectly well' (1973:198).

To this Tambiah adds,

“Now the implications of the relative statuses of the male seed and female field in which it is sown are critical for caste theory; critical but also problematic, for a male superiority cannot automatically lift his progeny from the taint of an inferior mother.

Thus ‘sons begotten by twice born men on wives of the next lower castes, they declare to be similar to their fathers, but blamed on account of the fault inherent in their mothers. Such is the eternal law concerning children born of wives one degree lower than their husbands...’ (*Manu* x, 6, quoted in Tambiah 1973:198-9)

He discusses the implications of this evaluation of seed and field for deciding the status of offspring born of various kinds of mixed unions, falling under hypergamous and hypogamous types. There appear to be differences of opinion among lawgivers in regard to status evaluation of the offspring of unions in which the female was only one degree lower in status than male. However in majority of these cases the child would have the same caste status as the father. But for this to happen, the caste status of the mother should be within permissible limits. Thus, superior seed can neither fall on an inferior field (beyond a certain extent), and inferior seed cannot (under any circumstances) be allowed to fall on the superior field.

The seed and the field as recurrent symbols occur in *Mahabharata* in the contexts where husbands are incapable of continuing the line. In these situations a substitute for the husband to contribute his seed for the sake of obtaining a progeny is normal. Thus one can easily find instances in the birth of king Pandu, Dhritrashtra and Bidur from the sage Vyas so that the line can be carried. It is also witnessed in the account of Pandu asking Kunti to conceive sons from some Brahman (Karve reprinted 1999:46). At this request Kunti told him about the gift given to her by the sage Durvasa and five sons¹⁵ were conceived by seeds of

Gods. What is striking here is Karna being born through the same process is considered to be illegitimate (kanin), only on the ground that Kunti was not married at the time of his conception. To quote Irravati Karve:

“The example which occurs again and again in the epic literature is that of ‘the analogy of seed and field’ (bijakshetranyaya). This analogy was used with respect to the ownership of a man over his wife and justified the practice of begetting sons on one’s own wife from somebody else. The wife is the kshetra or the field. It was argued that if a man owned a bit of land and if a seed belonging to somebody else happened to fall in that land, the fruit thereof belonged to the owner of the land and not to the owner of the seed” (1968:358).

However, the principle (bijakshetranya) and the associated right of lending the wife to another man came to be disapproved later (Dube 1986:45). This principle might have come into existence because a woman’s chastity was highly valued and the right over her sexuality came to be firmly interpreted as the right of exclusive access to her. Having identified the historicity of these usages and its customary and traditional decision-making, we will now place Bengali kinship in the wider anthropological field.

The Bengali notion of bangsa (line) and rakta (blood) seem to be close enough to the universal anthropological notions of lineage and genealogy. But here one must be cautious enough to insist on the differences. This is because, Bengalis have several notions of 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. Bangsa (line) and gotra are passed on through rakta (blood) in the male but they are acquired anew by women in marriage. 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 a universal sense. Moreover, fictive kin is kept outside both the realms and is taken as less important than that of 'biological' ones. There is nothing like this opposition in the Bengali case. Bangsa and gotra are not genealogically based on blood, rather they are cultural constructs. So are relationship-relatives¹⁶. Men do not change their gotra but women do. Women do not establish bangsa's but men do. The only confusion that can arise here is with the anthropological, rather the Euro-American, notion of blood in genealogy. Such conventional views, as Carsten (2000) has indicated, rest on narrow definition of biology to circumscribe what kinship entails. In the Indian context this has produced particular difficulties. As what emerges from the analysis of Bengali kinship is that, there is a combination of substance (both food and blood), affection and nurturance as ground for relatedness. These elements underlie all forms of relatedness whether genealogical based or not. Rather it can be said that the different forms of relatedness are in a continuum based on the varying presence of these different elements.

In this exposition we would like to go beyond a simple opposition between substance/code; or an equally simple assertion of their inseparability. In this we follow Barnett who viewed 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). It is not that the principles implicit in lineages, marriage or monistic substance-code is unimportant, but they leave a lot out. Thus, over simple oppositions like substance and code, real and fictive kinship, biological and social, may constrain our understanding of indigenous kinship practices as this fails to encompass the convertibility that is the essence of Bengali kinship. This is because conversion and transformability of substance demonstrates the permeability of boundaries between objects, persons, and types of relations. It can then be said, it is precisely "the mutability, fluidity and transformability of substance that underpins a contrasting set of notion about person and relations between person"(Carsten 2001:36). The person thus in India

is 'dividual'¹⁷ and permeable and it is through flow of substance that connections can be made (Busby 1997). This is in direct contrast to the individual of the West.

It thus seems 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 do 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 relationship through sharing of food, land, locality and gift giving. But this does not lessen the power of relatedness in indigenous term. Moreover, it does not inhibit or invalidate comparison. This is also not to suggest that abandoning the divide between the biological and social¹⁸ is the finite solution. Our interest in this paper is to see what is counted as biological or social and also in the power of imagining their intersection. With this quest in mind, we move on to the next section. Here we will examine how the advent of NRTs recreates this interaction and how it renegotiates substance-code continuum.

ARTs AND THE 'NEW' KINSHIP

Relationship between biology and culture takes on new twists in kinship studies when assisted reproductive technologies are considered. Work in this area covers the confrontation of Euro-American kinship with new "biological facts" and the ways in which "new" kinship is constructed (Strathern 1992 and 1992b; Franklin 1992, 2001; Atkinson 2000). In the context of Bengali kinship this becomes all the more important as we encountered relatedness arising simultaneously from biological¹⁹ and social realms. In so far as kinship is thought of combining these two realms, the recognition of one without the other gives people a pause. What is new is the assistance being given to each domain. Technological and medical advances are assisting the natural facts of procreation. The social facts of kin recognized relatedness are being assisted by legislation. Kinship, so to say is "doubly assisted" (Strathern 1992a: 20).

Charting kinship relation in this context will mainly focus on the new terminological complexities and relationships that it brings in.

In this regard, I will bring in an example from Yoxen (1986) to precisely articulate my point.

“A married couple discover to their dismay that they are both infertile. The man produces no sperm, and can therefore never be the genetic parent of a child, at least given the present state of biology. The woman has ovaries but they do not function properly. She has a womb, but is advised that for medical reasons a pregnancy would kill her. She too is infertile. Despite these problems they are desperate to have children, and are not keen on adoption. However, her sister is herself married and has several children, and she offers to act as a surrogate mother, that is to bear a child for them and then hand it over after birth. What is proposed is that an embryo created by fertilisation outside the body and donated by another couple should be transferred to the womb of the infertile woman’s sister, who will then carry the developing foetus and eventually give birth. The child is then to be handed over to the surrogate’s sister and her husband, and they become parents” (1986:8).

This kind of thing makes the head spin. In this example there is a new baby with three possible ‘father’ and ‘mother’. Clearly we are in a position where our languages fall short of vocabulary. Indeed the adjectives ‘social’ and biological’ have lost their power. As in this case two women have an undeniably biological connection with the child. Robert Snowden and his colleagues (1983, cited in Haimes 1992:121) devised an original nomenclature to cover the contributions made by different ‘parties’ to the child’s creation. They viewed at least ten different terms²⁰ might be needed to clarify such terms as “mother” and “father”. One can thus speak of “genetic mother”, “carrying mother”, “nurturing mother” and “complete mother”. The latter designates a woman who contributes genetic, carrying and nurturing motherhood. But there are even more terms for motherhood, such as “genetic/carrying mother”, “genetic/nurturing mother” and “carrying/nurturing mother”. There are a few variety of fatherhood terms since fathers cannot give birth to children (biologically speaking). But one

can still speak of “genetic father”, “nurturing father” and “complete father”²¹. No doubt these definitions are complex enough. An even more complex picture emerges when applied to the range of possible fertilization procedures. Haimes summed up those relationships that have spawned up from what she calls “third party conception” (1992). This includes fertilization procedures such as sperm donation, egg donation and surrogacy. We reproduce a table for enhancing our understanding of these emerging relationships.

FAMILY RELATIONSHIPS CREATED THROUGH THIRD PARTY CONCEPTIONS

Family created through	Child's relationship to nurturing father	Child's relationship to nurturing mother		Child's relationship to third parties	
	Genetic	Genetic	Carrying	Genetic	Carrying
Donor insemination	No	Yes	Yes	Yes	No
Egg donation	Yes	No	Yes	Yes	No
Embryo donation	No	No	Yes	Yes	No
Gestatory surrogacy	Yes	Yes	No	No	Yes
Gestatory surrogacy, using donor semen	No	Yes	No	No	Yes
Gestatory surrogacy, using donor egg	Yes	No	No	No	Yes ¹
Gestatory surrogacy, plus donor embryo	No	No	No	Yes	No ²
Genetic surrogacy, plus donor semen	No	No	No	Yes	Yes ¹
				Yes	No ²

Table from Haimes (1992:121)

¹ Surrogate ; ² Semen donor ; ³ Egg donor.

However, the table would look somewhat different if the donors or surrogates were siblings to the nurturing parents. In this case they have a genetic relationship with the resultant child. Moreover, with the addition of death during pregnancy and divorce or the unexpected appearance of twins it becomes all the more complicated. Here it would not be out of place to refer to the *International Herald Tribune* (10-11 Oct 1998; Akesson 2000:128) article under the headline “New Fertility Technique Shakes Ethical Ground, Experiments Combine Genes from Two Women”. It describes how a doctor in New York²² “for the first time has transferred genes from an infertile woman’s egg to another egg, fertilized it with sperm and placed the resulting embryo in the womb in the hope of growing a baby”. The main mass of DNA (the nucleus) was removed from the infertile woman’s egg and placed in a healthy donor’s egg, from which the nucleus had already been removed. However, there were still mitochondrial genes remaining in the cytoplasm of the donor’s egg that could not be removed. This meant every child resulting from this procedure would inevitably have two genetic mothers. What this means in medical and biological terms is no doubt uncertain. But what it means on the cultural level to have two genetic mothers is even more unclear.

To obtain a perspective on today’s situation, it may be worth bearing in mind the notion of blood in Bengali kinship. However, as blood is also the food taken, we can see the intermingling of natural/biological or social. However, the natural world, including the facts of human biology can no longer in the late twentieth century, be taken for granted. Thus, we can follow Strathern (1992) in saying “nothing today seems further from erosion than the concept of nature”. Though in the Bengali context, unlike the West, “culture” never existed “as human enterprise against the givens of nature” – but how in this age of reproductive intervention the concept of blood changes becomes important.

We take in artificial insemination through husband (AIH) as the procedure for conception in the first instance. In this case the semen (seed or bij) comes from the husband and the womb and uterine blood from the woman. This has serious ramification for the Bengali kinship notion of wife being the 'half body' of the husband. As it is through the sangam that the unrelated bodies become one and the blood of one mixes with the other. In case of AIH does the concept of sharing the same body still persist? This is so as husband and wife shares the same body not because they inherit portions of the same, but together have the capacity to reproduce a body in common to both of them. Thus the institution of marriage, which is grounded in the procreation of offspring is called to question. Moreover, AIH in India is often perceived as adulterous and immoral as it involves fertilization with donor sperms and masturbation (Gupta 2000:367).

However, this no doubt values the "patrilineal system" (Lingam 1990; cited in Gupta 2000) of blood bond which is exclusive for rituals and property transfer and hence in a way becomes a preferred choice against adoption outside one's kin and relatives. Moreover, AIH becomes even more complicated in Bengali kinship conceptualization if a dead husband's sperm is used. There are several questions to be examined here. This is because posthumous conception can raise questions about the chastity of women and the legitimacy of the child born. To quote Alton:

"An act of artificial insemination after the father has died cannot represent a couple's ongoing commitment to each other, nor can it lead to the welcoming of a new life into an existing relationship. The father is no longer present as a living human being. To use part of him to make a child is a travesty of normal, conscious, human procreation" (1996, cited in Simpson 2001:1).

Posthumous conceptions draw all involved into a demanding negotiation of the social and symbolic fact of kinship, not merely biology. It loosens the ground upon which normative construction of marriage, paternity and morality are built. In India no doubt levirate marriage

has been a regular practice. But this never raised serious questions about succession and ownership. Moreover, in Bengali culture where the eldest son has the right to burn his father's body on death, this raises serious implication. The question being whether the time of preservation of the semen or the actual 'bodily' birth would be given priority in ordering the siblings. What is of particular interest here is that kinship is made differently visible.

To say this, is not to forget that the notion of 'posthumous' conception is ancient. In the Durkhemian sense, society has always devised ways of transcending the absoluteness of physical death in the interests of social continuity. For example Evans Pritchard's (1951) account describes how dead men may acquire offspring and how barren women became 'legal fathers'. These are classic demonstration of how social and biological facts diverge in order to maintain the legal fiction of a genealogical community. But the very fact that in case of 'technological' posthumous conception, the generation of the 'sperm' and the fertilization of the child take place at different time frames make all the difference.

Kinship relations hence can no longer be unproblematically predicted upon 'facts of life' (Franklin 2001). It must be reworked to encompass a widening definition of generation and reproduction. As Strathern (1992a; 1992b) has argued, "the more the process of making human persons is facilitated, assisted and given legal certainty, the harder it becomes to think of nature as something separate". In the genesis of kinship relation we encounter novel configurations of biology, technology, law, regular clinical practice, and economics.

These no doubt destabilize the 'facts of nature'. But, at the same time quite surprisingly posthumous conception fall in line with the Indian 'dividual' concept of personhood. As Strathern (1988;cited in Simpson 2001:10) proclaims "we might cast sperm as the 'dividual'

entity *per excellence* having a rich potential to mediate new forms of social relationship". Here Strathern undoubtedly followed Marriott. At this point, it is not untimely to recollect Marriott's famous formulation:

They [dividual persons] must also give out from themselves particles of their own coded substances – essences residues or other active influences – that may then reproduce in others something of the nature of the persons in whom they originated (Marriott 1976; quoted in Simpson 2000:10).

Seen in this way, to become pregnant using dead husband's sperm has the unique agenic essence of a person with which Bengali kinship is familiar. What is of particular interest in this concept is the emphasis on the replication. This is possible due to the transaction of the substance. It is complemented by the belief that substance contains the person and not the other way round. This again, at another level, strictly goes against the Bengali notion of substance following from person. As here substance is not object redolent with the anticipation of future persons. More so, as it portrays the view that the reproductive potential of sperm is already figured in kinship narratives long before conception takes place.

If we now shift our attention to 'artificial insemination through donor sperm' (AID),²³ the process of kinship becomes all the more unsettling. This is because it not only ruptures the shared bodily construct of husband and wife but also that of the child who no more carries the 'line' of his 'father'. Rather he carries the 'line' of the person who donated the sperm. This is because in Bengali understanding the semen and the sperm is highly concentrated blood. It is the blood that the man passes on to carry his line. It is the desire to pass his own *guna* (characteristic) and to see it incarnate in those who will live after him. But, how can '*guna*' flow from a father who has not played a role in reproducing '*bij*' (seed)? Thus the child born to this union can never be taken as '*aurasaputra*' (son born from his body). Rather, technically

speaking he is a 'dattak' or 'posya' (adopted) son/daughter. Here then the relationship between the child and father is destabilized. As both the parents do not participate in giving birth (janma-danakara) to the child. In this context whose surname the child should take on becomes an intriguing question (though it might not be unsettling for legal discourse). This is because a surname in common understanding speaks of the child relation with the father and his jati²⁴. Moreover, as in Bengal, adoption from outside the circle of relatives (attiya-sajan) is not encouraged due to anonymity of 'quality of blood'; AID also raises serious concern. Moreover, here the father actively contributes with his wife in bringing the child and is not related to the latter only because he is the child's mother's husband. Thus AID can pose serious question of legitimacy. As Lord Brabazon argues:

Children conceived through donor semen represented a conscious effort to bring forth an illegitimate child within marriage ... And not only was ...paternity in jeopardy ... knowledge that there is uncertainty about the fatherhood of some is a potential threat to the security of all(1987, quoted in Strathern 1992:41).

Here, we can bring in the inevitable example of the Trobriand child who has two fathers. The two fathers are respectively one whose semen moulds the somatic body and one who defines the kin group to which the child belongs. Yet the parallel is a poor one. Since the social identity of the Trobriand father is integral to his somatic role. In case of AID, however, the father's identity is optional and based on donation.

However seen in a different light the ramifications of AID appear as less new and less threatening to the concern of legitimacy. Here we refer to the birth of Karna and the Panduputras in the epic of *Mahabharata*. The conception of all these six 'brothers' were through what we might call using ART languages – 'third party involvement'. With no

problem of legitimacy posed all the five brothers were taken as the legitimate sons of Pandu. This was so because Kunti, Pandu's wife, conceived all of them through various Gods with the consent and advice of his husband. Whereas, the birth of Karna raised such a hue and cry because he was conceived through Sun-God²⁴ before Kunti was married. If illegitimacy would have concerned people of those days, then the claim of Panduputras to Hastinapur could have been negated just because they were illegitimate. In which case the fierce battle would have been unnecessary. The legitimacy of these children based itself on the notion 'that any fruit born to the field belongs to the owner'.

What distinguishes today's practice is that marriage itself is not enough as a criterion for legitimate children. As in AID the intended couple should subsume a contract with the sperm donor to have the child in his name. The laws that are coming up negotiate 'continuity' and 'change' in a complex way. Quite surprisingly they follow the 'epic' ethos. That is the child born within wedlock even through 'third-party conception' is a legitimate child of the husband of the married woman. This is possible if the husband agrees and decides to have baby in this way. What is new is that there is a concomitant thrust that the child should know his/her real/genetic parents. Underlying this assumption is the notion that biology supercedes the social and cultural. Thus usually it is natural to find one's own birth parents. In India where the formulation of the law is the mere extension of the Embryological and Fertilization Act of 1984 the same values carry on. However, how much this can merge with Indian values and sentiments is a question. As it can be said in Bengali context, naturalness of birth was not sufficient to establish real relations. Instead there was what we might say "the naturalness of social status"(Strathern 1992b 52). As for most of human history, issues of social reproduction have not been considered in biological terms, but rather in social and cultural language.

In this context then the search for one's genetic root acquires new connotation. This raises a series of question. How will the presence of a birth parent affect the social father's bonding with the child? How important are biological factors/genetics to a child's development and identity? If the sperm comes from father's father or brother, how is the relationship with the child established? What role is the birth father to play in the child's life? Who is to be considered the 'real' father, the sperm donor (who never intended to see or nurture), or the one who desired the child? Most importantly, how does the child handle the presence of several different mothers and fathers in his \ her life?

With these question in mind we turn our attention to In-Vitro Fertilization (IVF) and surrogacy. As in AIH, IVF through husband's sperm and wife's egg also curtail the social implication of shared body. If the sperm comes from a donor the case becomes similar to that of AID. What is added to it is that the egg might as well come from anonymous donor or relative. This further threatens our existing notion of parents. As here the genetic mother is not the carrying mother. In Bengal notions of kinship, as we have seen, the mother supplies both the uterine blood and womb (garbha). Thus IVF through oocyte donation splits the two. This is because, although genetic ties are often taken to be coterminous with biological ties, the equation is necessarily true for men. Women may be biologically related to their children in three distinct ways. These are genetics, gestation and lactation. Lactating women has served as wet nurses throughout history. However, it is through IVF, egg donation and embryo donation that genetics and gestation have been separable relationship. Riverie thus views that there is no language in the world equipped to deal with this radical innovation. Aware of the existing distinction between biological/social mother; he views "no society has had to make allowances

for this third function ... of the carrying mother who is not also the genetic mother”(1985; cited in Strathern 1992b: 61).

In this context then the mother who passes on ‘matrishakti’ through uterine blood and who provides nourishment to foetus is separated. This has serious implication in identifying the mother of a child. As in Bengali notions of kinship, the passing of ‘matrisakti’ is as important as giving birth from one’s womb. The question then arises who is the child related to ‘by blood’? This is because both uterine blood (food transformed) and nourishment (blood carrying food) in the womb are different forms of the same blood. Who will then be the child’s mother? And to which mother’s line will the child be related? In other words who will be the child’s maternal uncle, or maternal-grandfather? As both of them are child’s blood relative (though not jati), the connotation changes. Thus NRT brings in a new concept of ‘egg’ where earlier only uterine blood and womb existed. The term ‘ma/janani thus falls short and is unable to grasp the present subtlety of difference. As the maternal genetic material, the egg derived from the ovary of one woman determines the blood types and characteristics of the foetus. Nonetheless the embryo grows in and out of the substance of another woman’s body. The foetus is fed by and takes form from the gestational woman’s blood, oxygen and placenta. Thus who provides the ‘soft parts and who passes on the ‘guna’ is puzzling. In this situation, who and under what guideline decides whether shared substance is much more intimate a biological connection than shared genetics? More so when traditionally both blood and food had equal weightage.

Further, who will decide that for a Bengali mother what is of higher significance. That is to be a genetic mother or birth mother? As the choice is between “genetically related without carrying and giving birth” and “ carrying the pregnancy and giving birth without being genetically related”(Mahowald 2000). The language takes into account the fact that pregnancy

is essential but not equivalent to childbirth. Moreover, both are separable from childbirth. How long the continuum of substance- code can sustain this breakup is too difficult a question to answer at this juncture.

This becomes all the more mind boggling if both the donor egg and sperm are used and fertilized in-vitro to form a donor embryo. In this case the 'social' mother only gives her womb, whereas genetic material comes from the donor. The social father totally stands outside the procedure. So whether the child even metaphorically carries his/her social father's line and blood is a question that is often posed. Moreover, when the oocyte donor is a mother/daughter/sister or sister-in-law, the relationship that follows is bewildering. In addition what would happen when the sperm donor is a father/ brother/son/or brother-in law (and so on) to the intended social father.

Without complicating the situation with embryo donation by relatives we bring in the case of Flora as documented by Thompson (2001) in a California Infertility Clinic.

Flora will gestate embryos made from her daughter's egg and sperm from Flora's second husband. Flora will give birth, and her second husband will be the father. Flora's daughter will be the baby's half sister, not its mother. (2001:185)

We are here perturbed by the intergenerational confusion of a mother giving birth to her own "grandchild/child" and to her daughter's "daughter/sister" (2001:86). Here, the resulting child will be genetically related both to her ex-husband and that of her current one. Moreover, the embryo formed through the union of Flora's daughter's egg and that of her husband's sperm expresses anxiety about 'inappropriate' kinship. However, as depicted by Thompson, neither Flora nor her daughter was anxious about the resulting incest. To bypass the

connotation of adultery, egg/ sperm/ embryo donation is seen as a 'gift' from a 'donor couple' to a 'receptient' couple. The implied link is established between families and not between individual partners.

Thus, what emerges clearly is that kinship ideology is played over in a very complex way. It can be said that 'modern' day kinship portrays 'doing' kinship according to one's necessity. It is in direct contrast to the idea of fixed and unchanging kin-relations. These different techniques thus raise different means to substantiate new practices of biomedicine and the social meanings of kinship. NRTs thus paradoxically creates both. On one hand it creates more explicit biological definitions of relatedness. On the other hand it creates precise social definitions of parenthood. However, these are not always complementary. Science does not help very much to hone our understanding on this subject. Rather one discovers a number of categories of relatedness with hazy inter-relatedness.

However, our understanding of these ramifications will remain incomplete if we do not incorporate gestational and partial surrogacy. Gestational surrogacy is technically identical to donor egg IVF. Two things make donor egg IVF and gestational surrogacy different from each other. In the former case the sperm with which eggs are fertilized comes from the gestational woman's partner (or a donor standing in for him). In case of gestational surrogacy sperm comes from the partner of provider of the egg (or a donor standing in for him). From a laboratory perspective there is not much of a difference. But for us interested in social issues, it makes a lot of difference. As Thompson comments:

"Both gestational surrogacy and donor egg IVF separate shared bodily substance and genes, but whereas donor egg IVF traces motherhood through the substance half of this separation, gestational surrogacy traces through the genetic half"(2001:179).

Moreover, in the case of surrogacy, the child born is considered legally to be the child of the surrogate mother. This is in contrast to the other ART arrangements. As here the mother literally gives her child for adoption to the commissioning couple this has serious implications. The fact that the surrogate mother carries the child makes it different from pre- conceptual ovum donation. The equivalence is genetic only. Practically, morally and psychologically we are discussing something complex. It can perhaps be placed close to adoption²⁵.

In this context, Bengali notion of uterine blood coming from yoni (ovary) and womb is segregated. Whereas donor egg IVF gives importance to uterine blood, the gestational surrogacy gives importance to womb. Thus the condensed concept of motherhood undergoes a fair amount of splitting. In case where the surrogate mother is a family member, the emerging relationship is beyond our existing knowledge system. Here again we bring in the case of Rachel from Thompson's (2001) Canadian infertility clinic.

“Rachel will gestate embryo's made from Kay's eggs and sperms from Kay's husband, Michael. Rachel will give birth, but Kay and Michael will be the parents. In addition, Rachel is Michael's sister.”(2001:182).

One is struck with the fact that this is not taken as incest by the people concerned. The question that arises is if the procedure would have used Rachel's egg and not her gestational capacity then what would have happened? This is really perplexing. As we do not have the slightest idea on what basis a particular act is considered threatening. The fact Rachel is gestating her brother in-law's child is obviously not taken as a serious matter. May be that the genetic mixture can only be a ground. In the Bengali system where a jamaibabu (brother-in-law) is not a kutumb but an attiya where does this lead to? Moreover, what is the relationship between the surrogate and the genetic mother? And where do these two stand in relation to

social mother? It rather obscures the relation between the surrogate and that of the social mother's husband, in case the latter is also the sperm donor.

However, some would definitely argue that Bengali families have always handled kinship relations in a way, which, can now be accomplished by modern reproductive technology. Are we then just making a mountain out of a molehill? Today's potential to bear one's sibling or grandchildren undeniably has certain similarities to yesterday's possibility of bringing up a sibling/ grandchildren /niece/nephew. But there are "at least two important differences, one biological and one cultural"(Akesson 2000:131). In the past the carrying mother could not be separated from the genetic mother. Nor could a woman give birth to a sibling or a grandchild. Thus the need to stress the linguistic distinction between different kinds of mothers and fathers or between biological and non-biological sibling was limited, as it stopped at palita baba/ma (adopted father/mother) and sat baba/ma (step father/mother). Along with the felt need to have a new vocabulary what is quite significant is the legal weightage given to 'openness'. This concern for openness is guided not so much from the child's perspective but rather from the belief that 'biological' pull is natural (Haimes 1992; Finkler 2001). The question however, arises if you tell someone he/she was conceived with donor sperms/eggs, should you also tell them something about the donor and where he/she is now?

Thus the concept of donation becomes important to ponder over. Donation is seen as a specific form of alienation. The donating persons cannot assume parental rights over the eggs or semen once given by them. Yet because of the intimate nature of the transaction involved, the donor still remains a parent of a kind. Indeed, it is recognized by the law that the children may want to know who the real parent is and the egg and sperm donors are referred to as the genetic mothers and fathers respectively. This is not just that a drastic split between

'biological' and 'social' is taking place. This is because the split is not only about relationships but also about language itself, which is stretched to some kind of a limit.

In this situation how the concepts like jati- kutumba will hold good is for the future to tell. What becomes significant is the concept of the 'relationship' relative. As it now may be stretched to include not only one's para-attiya (neighbourhood relations) and so on but also egg/sperm/embryo donors and surrogates. Thus along with sharing food and blood, and exchanging 'gifts'; sharing and giving 'genes' as gift modify Bengali kinship nomenclature. This also questions the basic proposition of Bengali kinship as the mutual relationship of the encompass and the encompassed, of the 'swami and stri' is bound to change in the face of NRT. How husbands and wives negotiate the constant presence of a 'gene' or 'womb' donor is hard to ascertain.

When the childless couples go through ART, they experience a whole 'new' world outside their medical treatment. They assimilate a different knowledge system altogether. It is through this learning process that not only 'new 'relations' but also 'new' identities of one's own body, sexuality and gender come into being. This is because the phenomenon of infertility takes on two different trajectories for men and for women. A woman's low self esteem is primarily related to her ineffectiveness of being a mother to a child. In contrast, inadequate and weak sperms come to mean 'reduced' manhood (Lundin 2000). This is because male sexuality is a precondition for a child's inception. It is this unavoidable connection between sexuality and 'production' of a child that shapes manhood.

The situation changes even more drastically if we introduce the concept of commercial transaction in 'gene' donation and womb 'renting'. So far we have assumed that these 'parties'

were not paid. It need not be always payment in cash but instead in kind. This replaces the established views of gift giving and altruism (Strathern 1992a) in Bengali society. In built in commercial transaction is the logic of capital seeking a profit on an initial investment. In this new forms of transaction questions of meaning, ownership, and intent all become highly contestable. The fact that these substances (sperm/egg/embryo) can be stored and transported, bought and sold, imported and exported, and subject to the laws of supply and demand is shocking. So is the concept of lending one's womb, which has been even projected as a 'new' kind of prostitution (Overall 1987). This means that humanness of reproduction embedded in relationship begins to give way to 'thingness' embedded in commercial transaction.

Thus with all these ramifications in mind we witness that 'rakter samparka' is more and more replaced by gene relation. This is a crucial break as blood in Bengali construct is never solely a biogenetic substance. It is rather a metaphoric usage for the continuous flow of life, relation and emotions (rakter-tan). Moreover, the constant transformability of blood (food-blood- food/milk) into food and the reverse signifies the overlapping of social and biological criteria. In the replacement of blood metaphor with that of gene, biology supercedes the condensed concept of the biological-social. It cannot become a substance in the existing order of things, as it is alienable from the body. At the same time the flow of it does not always constitute a relationship. Thus all questions about location, identity, and the road ahead, become collapsible into knowledge about genetic destiny. Blood as the mark of life and death, health and fertility, vehicles of passion and of relationship is surrendered to genes. But genes rather than communicating relationship stand as bits of mere information. And these bits of information (genetic link) are being presently conceived as 'real' kinship. If these genes

become omnipotent, then does the rest of human affairs- relationships, event, cultures becomes “surrogate for reality”(Strathern 1992a: 179)?

Hence in the twenty-first century we have come to talk of gene relative rather than blood-relatives. What is of importance to us is not emerging relationships but rather ‘information’ and code. This way of reducing ‘substance’ into gene; and the very fact that it is capable of deconstructing both the existing systems of nature and culture has serious implication both for the west and the east.

As Franklin (1992) argues neither natural science nor natural facts are independent of cultural context in which they are produced. “The world of achieved conception” she views “presents not only a changed landscape in the sense of changing natural facts, but a changed landscape of social facts and cultural meanings”(1992:78). As in this century nature has increasingly come to mean biology the idea of natural kinship has been biologized. Hence, the stark distinctions between social and biological parenthood have been introduced into regular parlance even in a society where it was not all that prominent. Thus, what is to be counted as natural or social has acquired specific meanings. The point is to see how these will affect relationships in the future.

According to Strathern:

“the more we give legal certainty to social parenthood the more we cut from our feet assumptions about nature of relationships themselves. The more facilitation is given to the biological reproduction of human persons, the harder it is to think of a domain of natural facts independent of social intervention. Whether or not all this is good thing is uncertain. What is certain is that it will not be without consequence for the way people think about one another”(1992a: 30).

In the end it is not clear thus what we mean by the terms substance-code or, for that matter nature -culture. What is certain is that the concepts are much richer and diverse than we thought them to be. It is doubtless that 'substantial-coding' of kinship system has undergone significant historical transformation. As understanding of 'substance' changes (from shared/gifted food/blood /body to that of genetic code), so too the capacity to make and unmake kinship out of them is transformed. This is because code is inherent in substance and code for conduct also changes with the change of substance. Moreover as substance for Bengalis deals with content and not relationship (Fruzzetti et al 1984), this change has a profuse effect. Thus, through new forms of negotiation either new lines of relationships are brought into being or erased by foregrounding and backgrounding various substantial connections and cultural codings. Thus, the father is the person who wishes the child and not the one who donates the semen. Though the latter is also a 'father of some sort'. Similarly a mother's sister becomes a 'mother of some sort' by 'lending' her womb to gestate her sister's genetic child. For medical reasons (not adultery) a wife now can carry a child whose genetic father is not her husband. She may even carry a child whose eggs are not her own. If she cannot carry a child another woman can do it. Likewise the man can be a genetic 'father' of a child whose mother is not his wife. And he can do so without bringing in the question 'legal' legitimacy of the child. Or a dead woman can now be a mother of the child (by freezing) her oocyte and so can a dead man become a father.

This chapter thus compelled us to consider how 'new' kinship is created. It is created in ways "that coexist with, push against, complement, contradict, erase and make explicit divergent means of connection and disconnection – that is they prompt us to connect less familiar dots"(Franklin & McLendon 2001:13). It is also that the lines between kinship and

other forms of relationship is becoming more and more fluid. The same substance thus may be made to create altogether different kinds of relations or no relation at all. In this perspective kinship is not only a theoretical concept in anthropological textbooks, but is also very much a social category at the level of commonsensical knowledge system. As such kinship theory rather being moribund is evolving anew with each passing day.

NOTES

¹ The choice of this particular domain is however eclectic. As my focus is not to understand an overall explanation of Indian kinship *per se* but whether subtle changes have been brought by NRTs. However this is not to deny that choice of Bengali kinship reflects both my personal bias and practical necessity.

² This work is primarily chosen because it analyzes kinship in Bengali culture in reference to Schneider's classic American kinship. As the author themselves 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)

³ This study also "grows out of a concern with aspects of structuralism as developed in the work of Louis Dumont, and a concern with domain of culture as explored in the studies of David Schneider"(1984:83).

⁴ Barnett (1983) feels that though substance and code are not universal; it is important for the comparison of American kinship with that of Indian kinship.

⁵ The ethnosociological approach which proposes a non-dualistic inseparability of substance-code in the Indian context originated in the work of caste-systems (see Marriott 1976; Marriott and Inden 1977). Despite this connection between the analysis of American kinship system and Indian caste system, it has not sufficiently influenced study of kinship in India. However, we go with Parry (1985: cited in Carsten 2001) in our connotation that strict monism cannot be the essence of Indian kinship. As both monism and dualism in varying degrees are present in both East and West.

⁶ 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.

⁷ This is further emphasized by Lambert in connection with 'jholi' relationship in Rajasthan. Here, 'honorary mother' (dharam - ki - ma) or 'honorary sister' (dharam - ki - bon) can be of a different caste, provided "they can drink water from each other"(2000:78).

⁸ It is interesting to note that the word *sapinda* refers both to body and ball of food offered to an ancestral father. Thus another meaning arises. It also includes those who have the capacity to share in the same food offerings. In other words two-shared substance becomes equally important in defining jati: (i) human bodily substance (ii) food.

⁹ It is a commentary written around AD 1100 in the code book of Yajanavalkya. It was compiled by a school of sastras scholars between AD 100 and 300.

¹⁰ That is altered code result in altered substance.

¹¹ The usage pattern refers to the context in which kutumba relationship is assimilated into the jati relationship.

¹² Dube (1986:22) views that this metaphorical usage is common all over northern, central India and large part of western and southern India too. This is reported to be equally true of Muslim villages in rural Bangladesh (Uusykila 1998) and Muslims of Bengal too (Fruzzetti *et al* 1984).

¹³ The metaphor of seed and earth is seen both by Inden and Ronald, and Fruzzetti, Ostor and Barrett as complementary. Leela Dube in contrast sees in it "an essentially unequal relationship"(1986:38). Moreover she finds that this "symbolism is utilized by the culture to underplay the significance of woman's contribution to biological reproduction". Busby (1997:263) also speaks of active complementarity of both parents in procreation. In most contexts people of Kerala (where she did her fieldwork) proclaimed that while the man provides the seed,

the woman is the farmer who actively cultivates. They viewed that "anyone can scatter a seed, but it takes lot of skill and hard work to make that seed grow".

¹⁴ 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 are highlighted in the context of conception in Tamil Nadu also. Here "utampu and uyir are the male and female element of blood, which are inherited by a new born from its father and mother respectively" (Fruzzetti 1984)

¹⁵ Yudishtira, Bhim, Arjun was conceived by Kunti; whereas Nakul and Sahadeva by Madri (Pandu's second wife).

¹⁶ Lambert (2000:79) based on his ethnographic data in Rajasthan states that the respondent 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.

¹⁷ This however, should be differentiated from the concept of individual person in Melanesia (Strathern 1992). As in the latter case male and female substance are associated with different parts of body. As Busby views, "substance may connect person in India, and Melanesia, but it is a substance as flow from a person compared with substance objectified as part of a person" (1997:276).

¹⁸ Carsten (2000) veivs that no doubt Schneider effectively questioned universality of biological kinship. But, "such proposition ... rested on and simultaneously took for granted, a division into the social and biological aspects of kinship. He did not explicitly challenge the value or validity of this distinction".

¹⁹ It can be said following Lambert's(2000) ethnographic study of Rajasthan that biological component to kinship is not exclusively Euro-American.

²⁰ These categories however, have to be understood in their social context. Snowden's (1983) terms have been used as a short cut to introduce the otherwise complex origin issues and relationship produced by them.

²¹ This laid Brazilian legal doctrine (Marques 2000:85) to identify four types of paternity. They are:-(i) legal paternity, (ii) biological-genetic paternity, (iii) socio-affective paternity, (iv) allimony-support paternity.

²² In the absence of primary data, the paper bases itself strictly on secondary published material. Examples from the west are cited in case of dearth of examples in Indian context, where no doubt procedures are familiar, but they are not brought out clearly.

²³ We do not include self-insemination by single women or lesbian couples. As in India it is only the heterosexual couple who have the right to have children through ARTs. However, we do not deny that this also has serious ramifications for the existing kinship system.

²⁴ However, in todays world the child can also use mother's surname. In that sense oocyte donation or surrogacy can raise similar questions as to whose surname is to be taken - genetic mother's, gestational mother's or social mother's?

²⁴ Karve discards the concept of conception through the Sun-god. Rather, she views that, Kunti was serving a Brahman for a year and "that she should bear him a son was not such an extraordinary occurrence"(1999:44). She also holds the view that Pandu knowing his impotence went to stay in forest so that her wife could get pregnant through some Brahmin.

²⁵ Bartholet documents that "sperm donors, egg donors and birth mothers in surrogacy arrangements increasingly voice of pain they suffer from being cut off from genetic forebearers or descendants". However, she opines that "parenting cannot be equated with procreation"(1992; quoted in Finkler 2001:46). This is because she beholds that a sense of immortality comes not from passing on one's genes but from the parental relationship.

CHAPTER - V

CONCLUSION

We have almost come to the end of our presentation. What we find is that amid many transformations that have taken place the constant negotiation of social and biological facts have remained a persistent quagmire. To our dismay, it is a controversy as easy to fall into as it is difficult to leave behind. It is well evident throughout the discussion that this controversy has taken on an additional dimension as biology has become more visibly and globally dominant. This has consequences not only for how we think about biology, biotechnology and our relations to them, but also how we figure out what counts as a biological and a social tie.

Thus this study of 'New Reproductive Technology' in the context of kinship opens up new possibilities that could not have been seen before. It challenges us ever strongly to answer the age-old question 'what is kinship all about'? It guides our vision to look both forward and backward. Ahead to the as yet little explored world of kinship-in-the-making, and back across a rich and varied history of scholarship on kinship and social life. This is because, while core anthropological concepts in kinship study offers more than a century of experience in 'what makes a relative'; current international genomic practices in molecular biology definitely provide a powerful counterpoint.

Kinship is investigated in this paper both as a theoretical concept and as a social category. It is the tension between the two that generates many of our central questions. On the one hand, kinship remains a central concept within anthropology despite its many transformations. Indeed this historical legacy gives the idea of kinship as possessing

sustaining capabilities and enduring flexibility. On the other hand, kinship remains a contested analytical concept.

In bringing these diverse perspectives together and into collision, we challenge the claims to return to more traditional approaches to kinship. Here, we have in mind Robert Parkin and like who asserts that “all human societies have kinship” because “they all impose some privileged cultural order over the biological universals of sexual relation and continuous human reproduction through birth”(1997:3). At the same time while we found Schneiderian analysis ahead of his time in questioning the universal biological basis of kinship system, we quite evidently reject the Schneiderian axiom which states (Franklin and Mckinnon 2001;Carsten 2000) that:

“In so far as the comparative study of kinship is tenable or a legitimate endeavour, it must be assumed that kinship is a unitary phenomena ...[for] if kinship is not comparable from one society to the next, then it is self evident that comparative study is out of question”(1984:177).

Instead we seek out to open up the category of kinship and how it can be put to use in ways that destabilize its conventional referents. Here, we have taken the trajectory of the feminist anthropological debates about nature, culture and gender and their parallels in the reevaluation of kinship. While acknowledging Schneider his due import, we view that he cannot be singled out as solely responsible for the “death” (Franklin and Mckinnon 2001:4) of kinship. Here it would not be out of place to point towards Yanagasiko and Collier’s remark that:

“Much of what is written about the atoms of kinship [Levi-Strauss 1969], the axiom of prescriptive altruism [Fortes 1958, 1969], the universality of the family [Fox 1967], and

the centrality of mother-child bond [Goodenough 1970] is rooted in assumptions about the natural roles in sexual procreation... 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; quoted in *ibid.*: 4).

It is thus rightly viewed that insofar kinship is thoroughly imbricated within such essential categories of natural, biological and genetic it is hard to decipher the ongoing reality. Hence, we move beyond Schneider, with Strathern to view that:

“Kinship was regarded as an area of primordial identity and inevitable relations symbol. It was once a part of the natural world that regenerated social life... Anthropologists, in turn, apprehended kinship as a symbolic construction that took after natural facts on which society imagined itself based, a microcosm of the relationship between nature, society and symbol” (1992a: 198).

Writing of kinship in relation to the NRT makes it extremely clear that the capacity of nature to be seen as a separate or distinct domain has increasingly been lost. As technological modification in name of consumer choice exposes its contingency, nature can no longer be taken as a model. Moreover, we go with Franklin (1992; 2001; 1997, quoted in Carsten 2000) that biology has become more ‘visibly’ constructed than ever before with technology as ‘a helping hand’. Franklin argues that instead of being a naturally given sequence of event, reproduction has become an ‘achievement’. This is in a way to say that science can no longer be viewed as extra-cultural; neither can kinship be defined entirely in terms of ‘natural’, ‘biological’ facts. In other word it is no longer a ‘given’.

It was Schneider who argued that the status of ‘natural’ and ‘biological’ in anthropological literature was not universal and applies particularly to the Euro-American

tradition. Strathern and Franklin put this statement on its head and claimed that in recent time these concepts are equally displaced in English and American social life also. This is because “the ways in which humans are today connected and related through biology undoes the very fixity that the biological tie used to represent”(Franklin 2001:314). The uncertainty surrounding this ‘new’ form kinship led Haraway to say “[l]ike it or not , I was born kin to Pu239”(1997:62,quoted in Franklin 2001:314). Here then is the perfect ‘postmodern’ parody of Schneider’s account of kinship (1984) discussed earlier. This is so, because to Schneider kinship is whatever biological relationship is. If science discovers new facts about biological relationship then that is what kinship is. But what if such facts are discovered that enable “a fish to be crossed with a tomato”(Franklin 2001:314). In Haraway’s view “people may be kin to transgenic animals, such as Oncomouse™, who carry human genes”. But such relations “blasts widely understood senses of natural limit”(1997:56; Franklin 2001:314).

Taking cues from all of them, we set ourselves the task to understand relatedness and the languages of Indian kinship. In so doing we took Bengali kinship as an example and tried to analyze it particularly in the light of an explosion of new knowledge of biology. Committed to what David Schneider and those anthropologists influenced by him understand to be a substance model of kinship, we have tried to raise questions about ‘what makes a relative’. One important point that has come up in the exploration is the symbolic density of the concepts of substances and code. In considering a range of analytical and cultural understandings of the substantial – codings of kinship (to use Carsten’s formulation), we find they are thick and dense with meanings as their negotiations are delicate and subtle. Moving from the late nineteenth to the twentieth century with the help of

Carsten and Franklin's documentation we found that both substance and biology have been operating as broadly defined categories in kinship analysis. In this process we found how profoundly Indian cultural understanding can interrogate, defamiliarize and even at times match Euro-American cultural and analytical presuppositions about what constitutes kinship. In similar fashion exploring the geneticization of biology and, in particular, the commodification of genetic information, we traced the complexities of the varied understandings of biological fact. Following the threads of Bengal kinship analogies, it became evident that in the late twenty-first century the substantial coding that might signify kinship include a diverse range of phenomena.

From this 'new' anthropological vantagepoint what emerges quite surprisingly is that a modified model of Schneider's American kinship can be applied cross-culturally. Then his own notion can be played against his claim to dismantle kinship. Thus, while we take in 'biological' properties as but one type of 'shared substance' we do not posit other types of sharing as falling back upon notions of procreation. In the same way we are not encouraged to believe that biological reproduction is exclusively Euro-American. As in Bengal, relatedness is as much through sharing sustenance, giving of gift as through procreation. Shared substance can take the form of milk for infants, created through the blood of the mother. Or it can be other forms of food shared with those of the same household, neighbour and so on. Usually the food is rice. Significantly, when rice is shared with people not belonging to one's 'jati' or 'kutumb' becomes one's 'attiya'. Ideas about blood, thus, do not imply that the substance is solely given at birth. It is not constant and forever. In fact it has a fluid quality. It is continuously produced from 'food, which is eaten'. In this sense, both mother and father's blood that the child receives are transformed food. Thus we can say,

following Kathey-Lee Galvin, that once the “order of natures becomes the ‘order of sharing’ and ‘order of law’ becomes the ‘order of ratification’, it does not follow that...etic concepts and cross-culturally valid models cannot be developed” (2001).

Such models, however we name it, as ‘kinship’, relatedness (Carsten 2000), or ‘significant same’ (Finkler 2001), must take into account the new situation introduced by NRT. It has come up quite clearly that throughout history never did responsibility and obligations of relationships rest quite straightforwardly on biology. But now more than ever it is clear that such ideas about who belongs to whom depend on social agreements about which biological facts are to count. Biology alone cannot decide matters. We have to take a social decision about which factor we wish to consider significant. An initial difficulty in addressing these issues of NRT – AID, surrogacy, posthumous conception is that they do not conform to known patterns of predictable behaviour. Our language can scarcely cope with the burden placed on it by this scientific ingenuity. As, this not only brings in multiple sets of parents but also creates ambiguous relations. We can here bring in the relation of surrogate mother to the biological father’s wife. Given the fact that these two women know each other’s identity, and interact during and after pregnancy, their relationship cannot be simply expressed. Further, it is unclear whether the surrogate mother’s mother becomes a grandmother; whether her husband has a relationship with the child and whether her already existing children have a sibling. The same confusion arises in case of AID or IVF through sperm or oocyte donation. We may easily describe such ties but the language we use may not do justice to the social and psychological perceptions that govern human and social interaction.

What we arrive at is that new technology requires new terminology. But there is a problem here. Though old words fall short of the new complexities that have evolved, every linguistic innovation has its problem because it carries with it the past connotation (Yoxen 1986), or if they are utterly new, their very unfamiliarity is disturbing at least for the time being. The fact that cryopreserved embryo suspended in liquid nitrogen tank is a biological relative may be difficult to assimilate. But these “unnatural kinds”(Franklin 2001) are becoming familiar and to some, it is surely a sense of relatedness based on shared bodily substance and genetic tie.

However, though the surrogate mother or the genetic parents may create ties of substance through nurturing the embryo, or donating oocyte or sperm as the case may be, but this does not get translated into social kinship. This is because the donors or surrogate mothers transfer their claim to the commissioning couple through the gesture of ‘gift’ or through the commercial gesture of transaction. Indeed gift appears to dominate the popular parlance as a solution about how to think of transfer of human capacities in procreation. Thompson illustrates this with his example from the Infertility clinic (2001) where both the women (the commissioning mother and the surrogate mother) adopt a set of practices (sharing shopping trips, birthing classes) and an enormous flow of gift from the former to the latter takes place. This gift-giving falls more in the category of paying a price in kind to the surrogate mother who is carrying the child for the commissioning mother and hence providing a service. Quite obviously all these interactions immediately stop and relationship is severed once the pregnancy had been terminated and the child has been adopted. This is an attempt to truncate the future chains of relationships and claims that could have been traced through the child’s genetic or gestational connections. Thus the gift links the two

parties and also divides them (Edwards and Strathern 2000) and the latter takes place by placing the social truth over and above biological facts. Thus the connotations of the term gift changes. It cannot be taken in the same sense in which it was dominant in social anthropological parlance. Gift-giving in anthropology had always been taken as a gesture of creating lasting bonds and relationships. This notion of gift, which severs bond, rather than creating it is definitely new and has come out sharply through the pages.

Along with new connotation of gift and donation, the concept of openness has gained a new momentum. The fact that the law permits the child the right to know about his genetic parents, or his/her surrogate mother, has an underlying sociological implication. This openness within families about the use of donated egg and sperm can be seen as a force running parallel with the rise in open adoption (Modell 2001). In this context it would be helpful to explore the parallels between the former and situations created by NRT. Striking narratives from adoptive individuals searching for birth parents (Finkler 2001, Carsten 2000a & b) is as old as adoption. However, Dolgin (1997, cited in Finkler) reports that donor inseminated offspring seek their genetic fathers too. It is worth pondering over how much this search is driven by the urge to know 'why was I given away', like that of adoption.

However, behind this is the belief, both in commonsensical and legal understanding, that the genetic parents are the 'real' one. This is because it is believed that it is genetically linked parents who are truly entitled to possess their children and to whom children truly belong. Thus, if one does not know one's biological connection it is as if one's identity is incomplete. Kinship relations based on genetic inheritance calls for connectedness and unite

people and jolt their memory whereas in modern society individuals may choose their kin on the basis of affective ties (Edwards and Strathern 2000).

NRTs thus in one way subvert both the ideology of choice and family patterns based on factors other than blood. In an interesting paradox, it proclaims genetic determinism and social choice and freedom. In one way genes are thought to be responsible for everything “from poverty to privilege, from misdemeanors to murder” (Siebert 1995:75 quoted in Finkler 2001:240). On the other hand, it is the social parenthood which is also justified and legalized on the ground that the child has come into being at their desire, even if from someone else’s genes. It is here that the child through NRT is different from adopted children. As in the former case the child came into existence because the commissioning parents intended to mother or father a child and in the latter, the child already exists to be taken under the wings of a ‘stable’ family.

Thus more the NRT tends to distance biology from social, the more it moves closer to it. This is so because NRTs is used in the first place from an urge to have one’s own biological child. However, when through donation the genetic ties collapses, social tie becomes important. But there is never a complete negation of it. Yet phenomenologically there is a distinction between experiencing oneself as a member of ‘kinship’/‘significant same’ group (Finkler 2001) that feels the solidarity and relatedness associated with shared food and experience; and experiencing oneself as a member of family, group, that shares the DNA molecule. The notion of shared experiences suggests that one is in the same world through constant interaction with others. But being part of the same DNA circle requires no social interaction. To sense that one is part of a family chiefly because one shares the same genes alters the earlier certitudes of family and kinship altogether.

To claim that NRT creates 'gene' family is to undermine the paradox and complexity that it generates. Moreover, it would not be altogether wrong to say that NRT creates the contrary, i.e. social family, as the urge for genetic child and genetic parents always lies in the backdrop. Ragone's understanding on *Surrogate Motherhood- Conception in the heart* (1994 cited in Brettell 2001; Lamphere 2001) is quite provocative in this regard. Surrogates, she views override their genetic contribution and view the adoptive mother as someone who has conceived the child "in her heart" (Ragone 1994:226 quoted in Lamphere 2001) and not through her body.

Almost in the same language, a sperm donor in a letter to his potential genetic offspring articulates this view "I am not your parent even though I am your (genetic) father because I never gave you anything. I never held you or cared for you. The man who did those things for you is your real parent" (Mahowald 2000:289). What sperm donors and egg donors, or for that matter surrogates, have in common is that they do not intend to be parents. In this context it is the desire for the child that becomes an important base for defining parentage and hence kinship.

This is an altogether new dimension which has evolved. While contraceptive technologies have taken care of undesired and untimely children, the desire for the child becomes the 'new' ground in which both social and biological ties have to face negotiation. On the one hand, belief in genetic determinism has led to the remarkable expansion of reproductive technology, and on the other, desire has become the grounding for the legal and social battle to be fought. Women willing to undergo difficult and often dehumanizing procedures¹ spend more than Rs 60,000 for a single child. As Finkler (2001:254) notes, "the discourse on reproduction is pervaded by images of banks, deposits, property products and

possessions". Articles in family magazines have such titles as "Babies to Order" and "Shopping for Mr. Good Genes" (cited in Nelkin's comments to Finkler 2000). Sperm donor profiles appear like personal advertisement, providing detailed information about donor's favourite colours and hobbies. Donor eggs also are advertised on the Internet on the basis of specific educational qualification and talents. A recent news article states that a couple at Dr. Vijay Shah's clinic 'Indu Sperm Bank' in Vadodara wanted the donor to be a "sportsman with good physique", another couple wanted someone "who was a topper in his field", "who had blue eyes, was short and had a lively personality," another preferred sperms from a "relative" and still another wanted a sperm from "a successful businessman" (The Sunday Express dated 15th June 2003). Eggs and sperms seen in this light are consumer products evaluated according to their genetic worth. Like any other commodity they are subject to theft and hence the issue of patency of genes is coming up (Times of India dated 12th January 2003). This can lead to creating a new 'other', deepening inequalities and producing a new social stratum based on the possession of genetic capital. It might appear to be stretching things a bit too far but this situation is not impossible in the face new technologies that attempt to invent perfect embryo. This leads us to ask ourselves, why are genetic explanations becoming so powerful in everyday life? As Susan Lindee and Dorothy Nelkin observed in '*The DNA Mystique*' (1995 cited in comments to Finkler 2001), that genetic explanations are appearing particularly in a society racked with anxieties. The family feels besieged, threatened by divorce, gay rights, the ability of children to sue their parents and other social changes. Families grounded in emotional ties appear to be chronically unstable, fragile and insecure. Genetics in contrast seem to ground family relationships in a stable and well-defined unit – the gene. This tries to provide the individual with indisputable roots that

are more reliable than the ephemeral ties of love, friendship or shared values. However, to what extent this argument can be accepted is a question, so is the analysis that uncertainties of the modern world can be weighed against the certitudes of genetic configuration?

New Reproductive Technologies may pose new situations for conventional notions of kinship, but they are also used and perceived through concepts of kinship. We very evidently witnessed through the 'defamiliarizing lens' of Thompson's infertility clinics the constant negotiation that kinship categories are subject to. Thus whereas the defining criterion at one point of time is genetic linkage, at other point of time it is gestational and sometimes it is social/nurturance. It is the urge for a genetic child that brings people to take recourse to ART. Still the genetic attachment is curtailed in a number of occasions at least for one parent (AID/ oocyte donation) and even both. Often it is the gestational capacity of the mother, which is taken as the authentic biological link, and the genetic link with donors becomes just a technical formality to be completed. At some other point of time, when the mother provides the genes and not the womb- the genetic contribution becomes the sole criteria for judging the connection with the child and the nurturance provided by the surrogate mother is dumped off. In more extreme cases where the child is not biologically (not only genetically) related, the focus automatically shift towards the more social criteria. Though this fluidity and flexibility is nothing new, no doubt the pace has increased. Thus we make explicit the claim that it is difficult to say, what factors go into constituting kinship at different points of time and in different situations.

How then one does separate the biological and social aspect of kinship in these accounts? The overwhelming impression is that this distinction is more muddled than any simple model would lead us to expect. Here birth does not imply 'diffuse, enduring

solidarity' in Schneider's terms. This is because it is emptied of the connection to certainty, longevity or obligation and rights. Nor, can we perceive a very sharp or consistent distinction made between what 'travels in blood' and what is absorbed in the environment. In trying to establish this new relation, we must somehow reorder the symbols of kinship. Instead there appears to be a considerable degree of picking and choosing, what Edwards and Strathern (2000) term 'interdigitation', between the apparent excess of elements of kinship which are available. Schneider's two opposed orders of nature and law become almost inextricably intertwined, when letters or legal documents can stand in for blood (gene) or nurturing, or birth mother appears to be a 'total stranger' to the child. The narratives of the use of NRTs were at all points a incessant mediation between natural and cultural constraints, and were neither culturally nor biologically voluntaristic. The ambivalence evident in feminist theory, for example about relative virtues of naturalism and social constructivism is entirely appropriate. What these reveal is that it is not necessary for the theorist to champion one strategy over the other. Modern medicine offers many cases where the reconciliation between the natural and the cultural is managed flexibly by ordinary people (the practitioner and the patients using the technologies in question). ART thus results in new anxieties, new aspirations and new debates about fatherhood and motherhood. Indeed, studying the strategies of NRT in the context of kinship convinced me that making distinctions between social and natural roles and facts in strict sense is difficult to sustain.

The point, is that human agency does not take things as given, but manipulate them and stretch them to their limit. However, when such manipulations stretch beyond a certain point with considerable frequency to the extreme limits, then the social order of meanings

and things needs a reshuffling. The time has surely come, or is soon coming, to rethink the concepts of father, mother, grandparents, uncle, niece, nephew and so on. As if one takes her/his own DNA and give birth to one's own clone, the big anthropological question is "will your family comprise you and your daughter or you and your sister" (Times of India dated 12th January 2003)? The urge for new terms thus becomes all the more important. The private domestic sphere is being reformulated around the child in a society where the use of techniques is becoming common. This is becoming evident too in the current popular cinema where an increasing number of films address to the mysteries of procreation. The genre of science fiction has moved from a fascination with outer space to a fascination with inner space. Here we have in mind the recent screening of 'Filhaal'(a Hindi cinema), which effectively tackles the intricacies of relationships that seemed to be terribly affected by an impending birth through NRT, namely surrogacy. The decision to have a child through surrogacy not only destabilises the relation between two friends (the intending mother and the commissioning mother) but also between the commissioning and the surrogate couple themselves.

It is no wonder that cultural critics cannot decide whether new reproductive technologies are best judged as innovative ways of breaking free from old cultural categories of affiliation, or, whether they are best demonstrated as part of a hegemonic reification of the same old stratifying ways of classifying and valuing human beings. Technological change and cultural conservatism go hand in hand. What is required is a 'catch up' in social, legal and ethical spheres to organize and negotiate the co-emergence of entities and relations produced in these extended cultural and natural biologies.

Having traced all these in-built unsettling dilemmas and paradoxes within the concept of kinship we move on to question how far a substitute is welcome. In this effect Carsten (1995, 2000) provides us with a concept of 'relatedness' and Finkler (2001) with an idea of 'significant same'. Carsten uses the term relatedness to indicate indigenous ways of acting out and conceptualizing relations between people as distinct from notions derived from anthropological theory (1995:224). However, people in different societies 'act and feel' numerous kind of relatedness. They are related to each other as friends, neighbours, fellow worshippers, and in myriad other ways. Finkler defines 'significant same' as a "group of people who are regarded as family and kin - who perceive themselves as similar and who consider themselves related on grounds of shared material, be it land, blood, food, saliva, semen, or ideological or affective content. Most important, membership in a 'significant same' group carries moral obligations and responsibilities"(2001:236). The concept of relatedness or significant same can be criticized following Holy (1996)' on the ground that "if people who do not share substance mutually acknowledge each other as kin, how do we know in the first place that they acknowledge each other as kin and not as something altogether different".

If we are to preserve kinship as a meaningful analytical category, kinship cannot be equated with 'social' or any other kind of relatedness. It has to be conceptualized as a particular kind of relatedness. However, it should not be restricted only to genealogical connection but must have a polythetic content. This battle over reconceptualization has a long way to go. All these conceptual reformulations are either too broad to include all social relations, or to narrow to echo 'kinship' in its traditional sense. Further, as Holy (1996:168)

emphatically claims, mere renaming a concept does not help us to supercede the problem inherent in its conceptualisation.

In contemplating the consequences of these shifts we are however confronted with multiple realities. As much as we are intrigued by ways in which boundaries have been breached, we are equally concerned to draw attention to the ways in which such ruptures reestablish and reinforce familiar normative categories. As much as we focus on destabilization of foundational categories, we also highlight the ways in which they signify the essential, the certain and the given in nature of things. As much as we focus on choice and negotiation, we also become aware that they are possible for some people, in some context, and not in others. And, as much as we wish to map out new directions in kinship studies, we are deeply mindful of the complex ways in which older questions become newly relevant by the recontextualization of kinship studies.

Even among the unsettling dilemmas and unresolved tension we have at least a single positive conclusion. By the end of the paper we are certain that our dissertation is not in a 'dying' field. Instead the story of kinship within anthropology no longer reproduces itself as the tale of a sub-field that has lost its object. In this case the narrative has changed. However, what it means to pursue this line of inquiry remains to be worked out, as research, controversy, medical technologies, and social development continue apace.

NOTE

¹ A woman in Calcutta contracted HIV from donor sperm in her quest for a baby (Times of India 19.5.03).

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