Chapter 5

Economics of Engineering

In the preceding chapters we have outlined how social relationships are engineered, guided both by the existing family values and gender norms, supported by legal strictures, as the individuals and couples make their journey through the infertility clinics along with medical practitioners and clinical staff. In such a portrayal we have thrust treatment seekers with an agency and also created a spectrum of choice from which they can choose their desired components in making a parent as well as a child. However, we have not forgotten that one’s socio-economic standing preconditions access to this medical market. Hence, in order to have a comprehensive understanding of the process of engineering, we cannot spare ourselves the task of dealing with the “biomedical economy” (Thompson 2005:11) i.e., the medical market in which such engineering takes place and the cost involved in the process.

I. The Emerging Medical-Market

It is since the last decade or so that the concept of medical-market has gained its prominence. This visibility of medical market, which has been referred to as a

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1 In this “biomedical economy”, Thompson (2005) highlights five significant shifts which are taking place. The first and foremost among them being “technology’s shift from production to reproduction as its fundamental mode” followed by “shift in the source of profit” from profits of worker’s labour to that of human reproduction. The third shift is from “capital being accumulated” in typical capitalist enterprise to that of capital having a “constitutively promissory core” in case of ‘birth industry”. The fourth shift is that whereas in case of capitalist production aim is to maximize profit by “efficiency and productivity” in case of biomedicine it is through by increasing “success rate of a procedure or a process and its reproductivity”. The final shift is regarding the “hallmark of capitalist problem” – as to “how to dispose of the bulky toxic waste by-products of productive processes”. In case of biomedical economy the question arises as to whether “reproductive by-products (organs from a cadaver or embryos) can be disposed at all” (Thompson 2005:11-12). Though we agree with Thompson on her four significant shifts her distinction between efficiency in the field of production and success rate in the field of reproduction seems to be an artificial schism. To increase success rate or to portray increased success rate for that matter is to merely project efficiency in productivity which will draw more ‘patients’ to the clinic and increase its profitability.
“theoretical anomaly” (Light 2000:395), can be attributed to the development of managed care, corporatised medicine and the rise of biotechnology industry (Conrad and Leiter 2004). Though medical market often does not meet all the criteria of the classical definition of market, yet, at this juncture in history, no one can deny the emergence of the “medical-industrial” (Conrad and Leiter 2004: 160) complex. While in competitive consumer market, the consumers are supposed to be informed, appreciate difference in quality, and have bargaining power and free choice, (Conrad and Leiter 2004) the same cannot be said to be completely true of medical specialized care markets, in general, and “birth industries”2 (Floyd and Dumit 1998: 4) in particular.

Still, essentially the field of medicine is evolving more and more as a market space due to various ways through which a direct relationship between consumers and medical producers or rather providers is developed and the product is commoditized and marketed through aggressive advertisements3. “Reproductive tourism” (Anand Bazaar, November 1, 2007) is becoming an important fore. In this context, “B in BPO is birth” (Patil 2004) and can be compared to outsourcing of MNCs, looking in India for cheap labour4. In case of infertility medicine, the flocking of foreigners is to tap the cheapest labor and reproductive material. In this market not only end product and services are marketed but at the same time anything and everything are marketed as disease in need of cure. Care is no longer an obligation of a noble profession but only provided to those who can afford it and all others are left outside its purview5.

In order to fathom the market of ART clinics in India, we would pay a cursory look at the available statistics in this regard. ART clinics in India are an integral part of the fifth

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2 The use of the metaphor of the industry justifies “legal mechanisms of property rights, WTO, TRIPS – the patent allowances under TRIPS to ‘expropriate’ seed, plant, insect and animal DNA – to tell indigenous people that the DNA germplasm in their ecosystem is not really theirs, but is the property of the individual; scientist, corporation or mostly global North government that has rushed to patent …in mostly global South countries” (Darling 2006: 19).

3 For a detailed discussion on advertising, development of medical markets and standardization of them, see Peter Conrad and Valerie Leiter (2004).

4 In order to maximize profit, first world economies are relying on sites where labour is “cheaper, less assertive, less taxed, more feminised [and] less protected by states and unions” (Comaroff and Comaroff, 2000: 295).

5 It can thus be said, “Universal commodification, is the capitalist’s brainchild” (Posner 1992, cited in Bridges 2002: 128) and is equally true of medical market.
most privatized health sector of the world. A conservative estimate of the potential infertility treatment in the country is Rs. 25000 crores per year (ICMR 2002). According to media reports, 45 crore rupees transaction takes place in reproductive business in a year (Anand Bazaar, November 1, 2007). The establishment of a fully equipped ART center in rural areas costs around Rs. 20 lakh and Rs. 40-45 lakh in the cities depending on the cost of property in a particular place (Nautiyal 2005). 15% of this money comes from the couple accessing the procedure (ICMR 2002). Private health care in India and ARTs market, in particular, is giving rise to growing medical tourism⁶, which is expected to become $2.3 billion industry by 2012, next only to information technology (Puri and Kapadia 2006). In a joint report, the Confederation of Indian Industry and McKinsey Consultants estimate a staggering 30% growth annually in medical tourism. The reason behind India being the destination for patients from Western countries is the comparative cheap rate at which these technologies are offered⁷. In India the cost per successful pregnancy (which on an average requires more than one cycle⁸) is Rs.250000 while in the US, the cost estimates range from $60000-$8000000 (Hindustan Times, January 10, 2006). 1 IVF cycle in US costs around $20000 (approximately Rs. 900000); in UK the cost of 1 cycle is 3500 (approximately Rs.28000) sterling; whereas, in India the cost is around $2000 (approximately Rs. 900000) (Hindustan Times, January 10, 2006).

⁶ Shree Mulay (2006), in her lecture on “New Climate for marketing of New Reproductive Technologies and Implications for Regulatory Process” cites National Council for Applied Economic Research Report, 2003 which states that India would be a major beneficiary for medical tourism once WTO rules and GATS are in practice. It states India to have the correct infrastructure to become the site for medical tourism. The major players are private hospitals like the Apollo Group, Wockhardt Hospitals, Fortis Healthcare, Escorts Hospitals, Max Healthcare and other large corporate hospitals.

⁷ INDIANMEDGURU is cited as the premiere most medical tourism company that provides international patient IVF treatment in India (www.free-press-release.com/news/200803/1206780489.html). It claims to help patients make informed decision about treatment protocol. Its services includes negotiated special price in reputed clinics, organizing fights, visa, accommodation, support line for friends and relatives back home and liaison with exotic spas, resorts and ayurvedic centres to satisfy tailor made patient requirements. It portrays “India as the mother destination” for those seeking to have their own child at the cheapest price (www.indiamedguru.com).

⁸ One cycle of IVF would include both egg retrieval from a woman and implantation of the embryo.
Market Metaphors in Everyday Use

It is not only that the notion of medical market is restricted to the theorization of this new trend in market space. But also the providers themselves often employ market paradigms while dealing with everyday proceeding of the clinic in their internal communication. One such communication is taken from my field notes which speak of the competitiveness of the modern market and the fear of losing clientele:

Doctor to Administrative In-charge, IVF Department: *This week, there is only one pick up daily. The market is really bad these days. Maybe patients are flying off to Ballygaunge place, Gariahat, Park Circus – the various clinics that are mushrooming.*

Dr. Rohit Gutgutia of Genomme also voices a similar concern,

*We are running this clinic from April 2006. I had 200 patients the first month. So it was quite a start off. But then around September-October, the number of patients dropped suddenly. I did not even have 50 patients a month. I got so panicked that I called up a friend in BNC’s (Dr. Baidya Nath Chakravarty) clinic. However, he assured me that this is the usual market trend over years as number of patients accessing treatment slow down drastically during pujas and again picks up from November onwards after Kali puja (Diwali).*

Market and industry metaphors pervade the infertility clinic generating the idea that reproduction has not only been dragged out of the four walls of the family but into a market with business agenda and industrial production (reproduction) in place. The internal conversation between doctors and staff becomes an indicator of how they look at their profession as being part of a business enterprise running on the ethos of capitalist profit and capturing client. As such it capitalizes not so much on people’s desperation as on their dreams. The market competitiveness also seems to threaten the monopolistic business house for fear of losing patients as new clinics have been opened up. It is in this context of medical market which is striving on profit motives that women and men have to negotiate their spaces for engineering parenthood. As such, the process of engineering

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9 This is what Radin (1996, reprinted 2001) call “market rhetoric” – “the discourse in which we conceive of and speak of something as if it were a commodity subject to market exchange” (2001:6).
is far from ideal. Given that, the very access to infertility clinics is guided by economic consideration of whether she/he will able to pay the cost of the engineering that they intend to perform.

Aggressive Marketing Strategies in Place

▶ Marketing the Dream

In a quest to promote the market for reproductive technologies in India two fold marketing strategies are in place. The initial aim is to create a market by highlighting the demand and aspiration for a child in order to fulfill marriage, family and individual lives. These clinics promise to deliver infertile couples a prized possession with captions like “Hope, Happening, Happiness”, “Possible for YOU Too”, “Your only Love...Coming Soon”. A brochure of a fertility clinic in Delhi mentions, “Dream comes true...because every couple has a right to have their own child”. The patient information booklet of Genomee introduces these techniques as providing “The Chance of a LIFE... (Jibaner Sambhabona)” (Genomee Patient Information Booklet). In similar lines, the patient information booklet of GDIFR titled “Come Let us Celebrate Life and Usher in a Glorious 2007”, (GDIFR Patient Information Booklet) introduces the clinic as the one to “strive onwards for light” in the “darkness of childlessness” and one that “moves on”. It also has series of pictures which show the development of the embryo and says, “Life’s beginning in safe hand”. This market strategy, first of all, establishes that the desire for a child is the most natural thing and it is unlikable if people do not thrive to have one. Having set the demand in place they also promise to have the magic tools in their hands which will make the dream come true. The clinics claim that they not only “inspire people to have a dream but take the pain in achieving them”. Once the individuals have been fed with the imagery of the possibility of having child in cases otherwise

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10 It also quotes a popular Rabindrasangeet “o alor patho jatri. ... ekhane themo na” (Oh! light bearers do not stop here) (translation mine).
11 This is a promotional picture by MediCult, a company that markets the ‘media’ for fertilization and development of embryos.
12 Dr. Sumit Dutta, who has been instrumental in establishing IRM in its initial phase made this remark while introducing IRM in the 13th Annual IVF Baby Get-Together, January 2007.
impossible, the uniqueness of the clinic and the individual practitioner as the achiever is highlighted.

As an integral part of aggressive marketing strategy, the websites of the clinics highlight their aim to deliver services uniquely custom made for the relevant purchaser. This excerpt from the website of a Mumbai based fertility clinic becomes self exemplary of this phenomenon:

_All Muslim couples will be counseled regarding the proscription of their religion while selecting an appropriate treatment modality. We will ensure that none of the Shariat laws¹³ are broken while providing infertility treatment (http://www.testtubebabyclinic.com)._

It also says clearly that it does not have to follow any rules regarding the maximum numbers of embryos to be implanted:

_Our pregnancy rates are very high, because we can transfer more embryos in difficult patients (unlike clinics in UK and Australia, where the number of embryos which can be transferred is limited by law). While transforming more embryos does increase the risk of high-order multiple pregnancies, this risk is negligible in difficult patients (for example, the older women or women with previous failed IVF cycles). In our clinic, we customize the number of embryos we transfer for each patient we treat, rather than just blindly follow a guideline (which has been laid down for the general population, without considering each individual’s specific problem) (http://www.testtubebabyclinic.com)._

Clinics also provide global look in order to attract NRIs and impart a feeling that ‘global is local’. It highlights how the clinic is situated in India but the infrastructure is built as an assortment of goods from the best brand of the world:

_Our CO2 incubators are Nuaire incubators from USA; our stereozoomand-inverted microscopes are from Olympus, Kapan and our ultrasound scanner is_

¹³ Dar-Ul-Ulum, a Muslim religious unit has issued a mandate saying that the use of In Vitro Fertilization in case of infertility for Muslim women and men is in violation of Islamic religious beliefs and practices. Though this is not a unanimous decision but no doubt the dominant one. Some organizations and individuals have disputed this mandate, for e.g., Saista Ambar of All India Muslim Women Personal Law Board has disagreed with this and have opined, “if women doctors are present, then this is not a big deal”(Dainik Statesman, December 29, 2007). For a detailed understanding of official and unofficial discourses surrounding the practice of IVF in the Muslim world see Inhorn (2006). For an overview of Christian Ethics and New Reproductive Technologies, see Rae (1993).
from Aloka, Japan. We use IVF catheters from Rocket of London, UK; ICSI pipettes from Cook, Australia; the Saturn laser unit for embryo biopsy from Research Instruments, UK; IVF culture medium from Vitrolife, Scandinavia; and IVF disposables from Becton Dockinson, USA (www.drmalpani.com).

In order to attract the NRIs and foreign clients from other parts of the world, namely, USA, UK, Canada and even African countries, the entire package is advertised which includes not only treatment but entertainment as well. It thus highlights the entire travel for treatment as a very simple affair which is just a “click away”:

You can book your tickets online, and find the best deals, check out http://guides.usaindians.com/travel/. A return air ticket to India from US costs around US$1000-1500. Your husband can accompany you, or you can hand carry his frozen sperm in a dry shipper (which you will need to borrow from your local infertility clinic). The clinic is at Bandra, just 20 minutes from the International airport, and is truly in the heart of Bollywood country (Beverly Hills of India!) (http://www.iwannagetpregnant.com).

See Taj Mahal by the moonlight while your embryo grows in a petri-dish, or stay in five-star apartment suite while you undergo hormonal treatment cycles (quoted in Shree Mulay 2006).

This is done to lure foreign patients and Indians alike to the clinics. This is because ART treatments cost one-third in India of what it would have cost in London. According to Dr. Hrishikesh Pai,

First we got only Asian NRIs, then Africans.... Now whites who used to go to doctors in USA, UK are shifting here (Patil 2004).

This aggressive advertisement strategy either through patient information booklets, brochures or websites are geared towards one single project: to attract patient to their clinic by claiming their success, professionalism, individual care and custom made treatment. They reflect all the characteristics inherent in modern advertising which claims a product to be at the same time locally available with global facilities, having universal standard but catering to particular needs. It transcends the product from its “use value” to symbolic “exchange value” of commodities (Williamson 1978: 43). It exploits the need and creates a reality made of lies, half-truths and white lies. It portrays the need as the
necessity not only to procure certain desired goods and services but a means to achieve the desired social identity.

Media: Co-Producer of the Imagery

The media is an undisputed partner in creating a magical reality of technological innovation. This is done through portrayal of media reports of both institutional achievements and achievements of individual doctors who claim to have long association with the clinics. These “institutional advertisement[s]” of scientific information, however, always have not been in the “marvel of science frame” (Bharadwaj 2000: 63). This became the trademark in 1990, shifting from the “awe and mistrust” framework in the 1980s, and played a significant role in mainstreaming ARTs in India (Bharadwaj 2000: 63). These institutional advertisements have been used as an effective tool to market reproductive technologies because these media portrayals allow publicity from an authentic platform without the involvement of the parties concerned. Medical establishment uses the authority of journalism to treat some facts as correct and authentic and give them the credibility of being true and, thus, markets the services and product. This becomes all the more important given the fact that the Medical Council of India Act 1956 strictly prohibits advertisement in any form (Bharadwaj 2000).

These reports comprising of ‘we are the one to achieve the first IVF child’, ‘delivered first IVF male child’, ‘first IVF-ICSI baby in kolkata’, and even media reports of sharing jokes in a conference with Prof. R.G. Edwards are also displayed in the clinic’s waiting area. This showcases how institutes try to compete with each other by highlighting their unique or pioneering achievements – ‘hall of fame’. By claiming this, they assure patients of the inevitability of parenthood in near future and their inclusion in the scientific achievement. In making the “baby maker” (Bharadwaj 2000: 70) visible not only

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14 In addition to the possible sites of advertisement that have been mentioned in this thesis, Sue Halpern (1989, cited in Shachar 2001) claims that medical journal texts are worded in a way so as to address the targeted clientele with a sales pitch.

15 The eminent doctor who played an instrumental role in giving birth to the first test-tube baby.
technology but also the hands that run them are made familiar. To this effect, the media in turn uses two strategies:

\[ \text{To produce an account of the new technology in a way that resonates well with readers of these news items, and second to deliver a credible and desirable image of the experts of these techniques (Bharadwaj 2000: 70).} \]

In order to market the product, these news items first portray these to be unique discoveries, which will usher in change, and the benefits they are ready to offer. But at the same time they are normalized in the sense that every other person, even the “rural illiterate” (Anand Baazar Patrika, March 26, 2007) is coming ahead to use it – thus claiming it to be accessible and affordable.

The second strategy is the projection of high success rate of these technologies by often quoting the implantation rate, or chemical pregnancy rate rather than the live birth rate or take-home baby rate. Thus it paints a rosy picture in which anyone can have a child, once they are at the correct doorstep. The success rates projected in the brochures, in patients' information manuals, in websites – all speak about the wonderful technology which is ready to help. This glamorization is further accentuated by the media portrayal of these technologies which uses language of hope, promise, and miracle and only talks about successes, new achievements, and happiness they promise. But they hardly talk about the incessant failures, the pain and trauma, the physical, emotional, and economical exhaustion of going through these technologies (Raymond 1993). The media representation is also framed in a language in which scientific achievements not only claim to bypass nature but also question the traditional outlook and superstitious mindset. The technology is claimed to make people both broader in their outlook in accepting the technology and in helping others and thus to create a “modern”, “scientific” knowledge base (Anand Bazaar Patrika, March 26, 2007).

Even the inadequacies and imperfection of these technologies are marketed as their successes and achievements. For example, the “triplet born to infertile couple”, which is a negative aspect of the technology, is marketed as success statements by the media. It says
“today it is not only possible to have a twin through IVF procedures, but having Triplet is also a reality”. It goes on to further substantiate the article by claiming, “till now through IVF, birth of twins has been a frequent occurrence. But last Sunday under the guidance of Dr. Sudarshan Ghosh-Dastidar triplets were born through IVF procedure” (Das 2006). This emanates the essence of a consumerist market, which thrives on free gifts and goods, where *if you buy one you get two free*.

**Strengthening the Supply Line**

If we look at the advertisements flooding the print media and websites we are left to conclude that another major purpose of advertising is also to aggressively procure reproductive substances in order to strengthen the supply line of medical resources. Enticing advertisements on websites offering generous payments lure youngsters into this money making donation syndrome. *I wanna get pregnant*, a website by Rotunda – The Centre for Human Reproduction, states,

> Donating eggs will not harm your future fertility or affect your health. We will be happy to pay generously for your generosity...infertility clinics get four to five calls in a day from women wanting to donate their eggs ([http://www.iwannagetpregnant.com/moneyback.shtml](http://www.iwannagetpregnant.com/moneyback.shtml)).

Infertility clinics are using all methods, including financial inducements and advertisements, to get more donors (Gupta 2004). Egg donors are sought through women’s magazines like Women’s Era, Sarita, Femina along with newspapers and also abounds the website of various clinics who claim to have their own egg bank. Advertisements to attract treatment seekers and donors, surrogates are thus common in one way. In the former case a demand for child is created, nourished and bloated up. In the latter case, as a complementary process the supply line is strengthen by creating a class of people willing to part with their reproductive substances and lend their organs in lieu of money. In this process men and women, or for that matter their reproductive substances are labeled with definite price tag depending on attributes (which are idealized in the society at large) that they offer.
Good looking, fair, 27-year-old lady from respected family available for surrogate mother. Only rich and genuine people contact (Women’s Era, June 2006).

Advertisements by couples in daily newspapers are becoming a regular feature:

Wanted: Healthy educated woman in Kolkata, preferably a postgraduate, and loving mother of a child to play surrogate mom. Fee: Rupees three lakh, plus medical costs (The Times of India, Kolkata, March 7, 2007).

Another advertisement says,

Wanted: Healthy loving mother but only Madhyamik (class 10th standard) pass: Rupees one lakh, plus medical costs (The Times of India, Kolkata, March 7, 2007).

It becomes quite clear with the last two advertisements placed in the newspaper that cost of egg donation depends on the particular personal attributes of the donor and not on the process of donation. Whereas the former egg donor is assured to be compensated rupees three lakhs, the latter will be paid one lakh for performing the same job due to the variance of their educational qualification. A news article states that couples at Dr. Vijay Shah’s clinic ‘Indu Sperm Bank’ in Vadodara wanted the donor to be a “sportsperson 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” (Mazumder and Dave 2003). This is more profound in the West, where recipients can have much more information on the donor sample and better the donor’s attributes higher is the price. One such bank is the ‘Abraham Centre for Life’ in San Antonio, Texas. Such a bank operates through the development and cropreservation of

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16 Here educational qualification seems to be genetically determined as there is an assumption that the donor having higher degree will pass on the trait to the resulting child. This is crucial as all other social factors which provide access to higher education is totally negated.

17 In the West basic donor profile reads something like this: donor no 2456: Favourite colour is green, favourite car is Jaguar, favourite food is steak, favourite drink is red wine other than medical and physical attributes. SAT score is 1,269. The cost of the “dose” (semen sample) from a man who has a doctorate or is working on one is $235, compared with $175 for most others (Subramanian 2003). The most famous and controversial sperm bank in US – ‘Repository for Germinal Choice’ in California that harbours ‘smart sperm’ of Noble Laureates and young scientists (Kowles 1985) is an exemplary case of body part being branded and patented as intellectual property.
embryos from donated sperms and oocytes of men and women of different build, features and complexion. Those who are interested in buying an embryo are shown childhood and current pictures of sperm and egg donors and are also provided with biodata of the donors. The cost of the designer embryo ranges from 14000 to 18000 US dollars. Though the firm believes that the cost is high they are not ready to compromise on the quality of embryo. Hence they have restricted themselves to obtaining sperms from handsome graduates. The egg donors are also graduates and in their 20s (Ananda Bazaar Patrika, Kolkata, January 19, 2007).

In India ‘spare’ embryos, which are to be donated, are often advertised. An advertisement in the website of a Mumbai based clinic is as follows:

No. 185. 9 embryos. Husband- Age-28, Height – 6 ft, Complexion - fair, Blood Group- AB+, Nationality- India, Eye and Hair colour – black;
Wife- 26 years, Height 5ft 6 inch, Complexion – fair, Blood Group- O+, Nationality- Indian, Eye and Hair colour - Black. The cost is only 4000 US dollar (www.drmalpani.com).

These advertisements have become common in the websites of reputed clinics and are becoming an important site for “embryo outsourcing” (Ananda Bazaar Patrika, Kolkata, January 9, 2007). However, the difference between the upcoming embryo banks in the West and embryo given for donation in India is in the nature of embryo production. In the West embryos are custom made as per the requirement of the recipient couple; whereas, in India, as of now, the spare embryos¹⁸ from the IVF cycles become the source of embryo donation. So in the latter case they can choose from a range of available embryos but they cannot design the embryos as per their wish. The case of embryo banks and their fulfilling the client’s demand to have a baby with required characteristics has been compared to the way idols are being ordered before pujas (Ananda Bazaar Patrika, Kolkata, January 19, 2007).

¹⁸ To have a comprehensive understanding of the “embryonic economies” and successful and failed IVF cycles as the source of embryo supply see Sarah Franklin (2006d). Also see, Sarah Sexton (2006).
Emergence of Bio-Wealth/ Bio-Capital

The Medico-Legal Definition of Bio-Property

The field of ARTs has given rise to new kinds of property which has been variously described as biowealth\(^1\) (Haraway 1997), biocapital (Rapp et al 2001) or anticipatory capitalism\(^2\) (Thompson 2005). A document dealing with accreditation and regulation of ART clinics will definitely have much to offer regarding these new forms of property and its ownership and inheritance issues (Franklin 1995a). The ICMR guideline is no exception. The articles pertaining to storage of sperm and cryopreserved embryo become an important arena to look for medico-legal definition of ownership. This gives us a pointer to understand that amidst various parties, i.e., the clinic, the donor, and the commissioning couple who is taken as the owner of these prized possessions. Article 3.9.1.8 states,

> A semen bank may store a semen preparation for exclusive use on the donor’s wife or any other woman designated by the donor. An appropriate charge can be levied by the bank for the storage. In the case of non-payment of the charges when the donor is alive, the bank would have the right to destroy the semen sample or give it to a bonafide organization to be used only for research purposes. In the case of the death of the donor, the semen would become the property of the legal heir or the nominee of the donor at the time the donor gives the sample for storage to the bank. All other conditions that apply to the donor will apply to the legal heir, excepting that he cannot use it for having a woman of his choice inseminated by it. If after the death of the donor, there were no claimants, the bank would have the right to destroy the semen or give it to bonafide research organization to be used only for research purposes.

In this article the semen emerges as the property of the donor who has the authority of using it. He also has the right to pass it on to either a nominee or a legal heir after his death. However, he loses his control over his property if he is unable to pay the amount levied for the maintenance of his property. While the legal heir or the nominee gets all the appendage rights of ownership, she/he, however, is exempt from using it on a woman of his choice. The reason behind such prescription, though not mentioned in the

\(^1\) For an insight into the making of biowealth in relation to Dolly, the cloned sheep see, Franklin (2003).

\(^2\) Thompson (2005) uses the term anticipatory capitalism to denote market in bio-products as it involves huge, volatile investments, venture capital which is yet to produce many marketable commodities.
guideline, becomes self-evident. It stems from the value system in which sperm is treated, no doubt as a property having an external existence and can be bought, sold or donated, its sexual and reproductive potential is not totally denied. Hence, there is a restriction of using the sperm by the nominee as this is seen by the guideline makers to be obnoxious and falling outside the maximum permitted limit of social interference into biological facts. However, as long the sperm is not inseminated in a woman, its reproductive and sexual potential is not explicit and, hence, it is comfortably assumed to be merely research material devoid of any identity. The person who does not store his sperm himself but donates it for the use of other couples loses on his right. The sperm then becomes the property of those who have bought it. The buyer might be a clinic or an individual or a couple. The donor loses on his ownership on the ground that he had sold off his property and been paid for it and, hence, no longer has any authority on it.

In a similar fashion the embryo also takes on the characteristics of a property to be owned. Hence, consent of the couples becomes mandatory in using the embryo either by other couples, the clinic for research purpose or to be discarded. In the language of the guideline, the couple with whose genetic material the embryo has been formed or the couple who has commissioned the embryo made out of the genetic material of the donor becomes the sole owner of the embryo with all the rights that are bestowed with ownership. The articles 3.11.2 and 3.11.3 is important indicator of emergence of new forms of property, ownership and custody:

3.11.2 Consent shall be taken from the couple for the use of their stored embryos by other couples or for research, in the event of their embryos not being used by themselves. This consent will not be required if the couple defaults in payment of maintenance charges after two reminders by registered post.

3.11.3 Research on embryos shall be restricted to the first fourteen days only and will be conducted with the permission of the owner of the embryos.

What is also crucial in this formulation is that the embryo, on the one hand, is attributed personhood from the 14th day; on the other hand, it is vested with an object like existence

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21 There have been reported cases of theft of embryos in the West. This is because in this arena embryo is one of the prized possessions both because of its research potential and potential for implicating relationships. Melanie Blum (2000) a lawyer has filed a lawsuit for the theft of human embryos for sale to infertile couples in an infertility clinic in California after a six month long audit of fertility facilities.
as it is seen as someone's property without any agency. It is in this dialectics of the potential human being and the prized property to be possessed, preserved and discarded after use that the embryo attains a new identity in the discourse of New Reproductive Genetic Technologies which Haraway calls 'cyborg entity' (1997).

The Actual Market: Priceless is Priced

It is the "monopoly of desperation" (Thompson 2005:20) in which the entire growth of "birth industries" (Floyd and Dumit 1998: 4) is sketched, in terms of demand of desperate patients, especially women, and not supplies. This is, however, far from true. The development of ART as an "entrepreneurial" initiative in a "quasi-private" initiative (Thompson 2005: 20) space is incomplete if we do not look at the market that it has opened up for new forms of commodities - reproductive materials and processes. The market for reproductive substances and processes emphatically talks of commodification, objectification and reductionism done by biomedicine (Sharp 2000). According to Dr. Gutgutia,

[T]here are big markets opening up for eggs donors and surrogates not only providing services to Indian couples but also those coming from the West.

Reproductive materials in this market become commodities in the same way reproductive technologies are. On the one hand, through the process of objectification and commodification these reproductive materials and organs assume an individual existence and become the sole identity of the person selling them. At the same time the physical, social and cultural attributes of donor also enhance the price of the reproductive material through a process of personification. The process of alienation takes place as neither the reproductive substance nor the product i.e. the child is presumed to be one's own. But at

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22 Expanding on Radin's (1996, reprinted 2001) conceptualization, reproductive substances can also be termed "contested commodities" (2001: xi). Radin formulated the term originally to designate babies in adoption, sexual services, corneas and kidneys which have become commodities.

23 The market mechanism in place for reproductive substances seems to follow similar logic and contradictions inherent in marketing of newborn babies through adoption procedures. For discussion on failure of market mechanisms in case of adoption see Prichard (1984).

24 This is not to claim that the body is commodified only by biomedicine. There are definitely a lot more actors in place in perfecting the process of commodification. Media is one of the prominent actors among others. For details see, Clive et al 2006.
the same it is also personified as the physical, educational, professional traits are attributed to the reproductive substances, as it enhances its market value. As, a surrogate says,

*I have prepared myself that the baby is not mine and I will just give birth* (Bhattacharya 2007).

In this market, sperms and eggs are commodities to be bought and sold or rented to the highest bidder. In this booming baby market good sperms and eggs are handpicked and definitely comes with a cost. The emergence of egg (and also sperm) as a commodity becomes clear in the discussion that takes place among the staff regarding posthumous conception.

*Staff 1: It is as if the first wife is like a duck/hen who has laid eggs and others have come to buy it.*

The word ‘egg’ brings in connotation of ‘laying’ eggs which can be bought and sold or given to others. In this conversation the egg assumes an external existence and the clinic staff has brought an apt analogy of chicken’s egg, which exist outside the bird’s body and is a product in the market for sale and barter. The fact that sperm and even egg in the form of embryo can be stored and transported, bought sold and bartered and subject to the laws of demand and supply means that “human-ness” of the substance gets compromised as its “thing-ness” evolves assuming the identity of a commodity and property (Atherton 1999, cited in Simpson 2001: 13).

The way sperms and eggs are reified (Sharp 1995, 2000) and are seen as mere resources to be sold of at the time of need for money becomes clear through these news articles, “Mumbai girls sell eggs for Rs. 20,000”:

*Young men and women in their twenties are selling their sperm and egg for financial gain... Most college students and professionals who opt for such*

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25 Similar process of simultaneously alienating and personalizing is witnessed in case of organ donation both from living donor and cadavers (For detailed discussion see Sharp 2000, 2001).
donations say that they do it for economic reasons. Pooja (name changed) says: "I have donated for economic reasons. I was in dire need of money. I am staying as a paying guest and I have so many expenses that I thought this could a fast way to make extra money" (Gupta 2004).

Similarly,

"Genetically sound," sperm donors in the 20-40 age group...said, "it adds to my pocket money". Young men who donate sperm are paid around 20000 (Gupta 2004).

The movement of reproductive material and processes also follows the "modern routes of capital" flow – from "South to North, from third World to first world, from poor to rich bodies, from black and brown to white bodies, from young to old bodies, from productive to less productive...bodies" (Schepher-Hughes 1998:5). Hence we find the third world women being egg donors and a surrogate to a wide range of foreign nationals and like all other arenas of modern market, reproduction is also outsourced. In this arena we find both young college-going girls in metropolitans donating for fast pocket money and women from rural or semi rural township from poor families coming in dire need of money. This new business has captured the interest of remote village women and metro youngsters alike. As one of the surrogates involved in "uterus business" (Dainik Statesman, November 7, 2007) puts forward:

I live in a rented house. But it is quite troublesome. What harm is there if I earn some money by just delivering a child for a [British] couple. If I can earn money in this way, I will be able to build a house for myself.

Or as another 31-year-old woman is 'loaning' her womb for 150,000 rupees and speaks candidly about needing the money that she will get from delivering a child because her shop job pays only 2,000 rupees per month (Ramesh 2006).

26 Though this article cites that men get Rs. 20,000 for sperm donation, in my interaction in the field I have been told that the amount varies between Rs 500 to 2000.
27 In case of kidney donation, slums of Mumbai, Kolkata and Chennai have been referred to as "organ bazaars" (Chengappa 1990). The same can soon be said to be true of sale in reproductive substance and labour.
28 In this study, both the surrogates were from lower economic strata and in acute need of money. In one case the husband has lost his job and the family needs to survive; in the second case, the woman was a divorcee with small children.
I am not rich so the money will help me a lot.

The promise that this market offer is that if one sells his/her reproductive substance she/he will earn more money that her / his years of labour will yield. This promise of easy money and "accruing wealth from nothing" (Comaroff and Comaroff 2000: 310) which is the quintessential feature of this "millennium capitalism" plays on the psyche of individuals and prompt them to enter into this trade off. These reproductive substances thus become material/ medical resources for (Awaya 1999) procedures to be carried on and hence possession of these is synonymous to possession of any other valued resource. The trade in reproductive substance and renting of reproductive organ thus parallels Marx's (1867, reprinted 1991) understanding of land as a commodity which fetches a price without being a commodity of labour. This economy of reproductive substance and processes can thus be explained as a concoction of Marx's understanding of commodification, i.e., alienation of one's body parts and processes and monopolization of it; and Comaroffs' (2000) notion of millennial capitalism which thrives to earn without putting in labour.

† Principle of Demand and Supply

The language of demand and supply pervades the field of assisted reproduction. According Dr. Pai, renowned infertility specialist,

There is a disparity in demand and supply. A whole generation of 40-year-olds is trying to have babies and can't produce eggs (Sekhar 2003).

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29 Comaroff and Comaroff (2000) argue that this seductiveness is the trademark of millennial capitalism and is visibly manifested in the proliferation of "occult economies".

30 This fetishism of body as components (gametes, uteri, genes) in which "the life-giving qualities of the body are produced in reduced, mechanized, and malleable but mute forms (such as DNA) has been termed biopleasure" (Burfoot 2003: 49). The "pleasure" component of the term refers to the "sublimated but central role of desire in production" (ibid.). The desire operates on two planes: "late capitalist accumulation of biological potential as valuable commodity and scopophilia (the pleasure of looking)" (ibid.).

31 For Marx, "the prices of things that have no value in and of themselves — either not being products of labour, like land, or which cannot be reproduced by labour... may be determined by quite fortuitous combinations of circumstances. For a thing to be sold, it simply has to be capable of being monopolized and alienated" (1867, reprinted 1991: 772).

32 It will be wrong to assume there is no labor involved in carrying a baby for nine months or the way in which eggs are extracted through a rigorous medical procedure.
It is portrayed that there is a high demand for reproductive substances and the supply is scarce and inadequate to meet the demand. This creation of scarcity of eggs and embryos match that of organ donation (For details see Sharp 2000, Scheper-Hughes 1998) and is based on the market equation of demand and supply. According to Dr. Gutgutia,

*Initially when we started this set-up (the clinic), we put up advertisements in medical colleges for sperm donors but nobody turned up. We ended up taking sperm from doormen, security guards and people of that standard whom I would not think of inviting to my home.*

Or as Nayna Patel, Medical Director of Kavita hospital,\(^\text{33}\), says,

*You see, Indian society is till conservative...convincing healthy mothers to take part [in surrogacy arrangements] is still difficult (Ramesh 2006).*

The failure to institutionalize such practice is giving rise to touts and agencies. Rise of agency or brokers\(^\text{34}\) are to be looked at critically because they are dealing with “vulnerable people on both ends of the contract” (Brinig 1995:2386) and would benefit by exploiting\(^\text{35}\) both the donors and recipients. Dr. Sanghamitra Ghosh, IRM observes,

*We do not run a donor programme as to do so is to get into a lot of hassles as this field is flooded with unscrupulous practice as there is a lot of money involved. Recently we have encountered touts who bring in young unmarried girls often from red light areas to donate eggs in lieu of money. These are neither registered agencies nor have any legal standing. But it is a single man show who has hold over a couple of women and want to earn money out of it.*

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\(^{33}\) This hospital has found seven surrogates in the past 18 months for British and American couples of Indian descent. The medical director has 20 surrogates including a family where a mother and her three daughters have each given birth for strangers (Ramesh 2006).

\(^{34}\) Brinig (1995) compares these agents with real estate agents who get paid whether or not the closing ever took place as agencies often get compensated just by signing the surrogacy contract.

\(^{35}\) Exploitation in this field of assisted procreation pervades not only donor-recipient transactions. But is also rampant in every other sphere, as it is still a market without game plans properly being laid. A field entry of the interaction between the treatment seekers, doctors and administrative in-charge reveals the following:

A fraud case came to limelight. The woman who was undergoing treatment and could not be in touch with the clinic as they lived far off depended on her brother. However, the brother who took Rs. 80,000 in order to deposit it at the clinic never made it to the clinic and sent some irrelevant over-the-counter drugs. It was brought to the notice of the clinic when the woman’s husband made the attempt to meet the doctor himself and enquire about the future course of action. It was then that they realized that the clinic does not take deposit of Rs. 80,000 at one go but takes the money over a period of two months according to the course of the treatment. This incident brings our attention to the vulnerability of patients both in the hands of medical establishment and relatives.
The same concern is reflected in the voice of Dr. S.K. Goswami,

There are agencies coming up doing unscrupulous business. They fake the same
girl as married, as Christian/Hindu/ Muslim as and when required.

In this scenario, the distinction between incentive and reasonable compensation has been blurred over the years with rising price of reproductive materials. There is a ten times hike in the price of oocyte in ten years span. Recently, an American Fashion photographer, Ron Harris has attempted to sell oocytes via his Internet site. For the eggs of foreign nationals, American University students and professional models, the bidding has been in the range of $15,000 to 150,000 (www.rosangels.com cited in Fuller 2000). There is a desperation being built on the side of the desperate parents’ desire to have a child and equally desperate sellers to trade off their reproductive substance in order to earn money. Scarcity is the mode of operation in order to create a need where none exists. This does not pay attention to the massive amount reproductive materials that are wasted due to over production, the lack of proper maintenance and care.

Unease with the Process of Commodification

We have witnessed how market norms dictate the birth industry and people who are involved in it, i.e., the medical establishment and the clientele both of whom plays their respective part. At one level thus there is definitely an awareness of the market structures in place revolving around buying and selling of medical services. But at the same time there is a conscious effort in place to look at the entire gamut of giving of gametes and surrogacy as wrapped up in overtones of altruism and gift-giving. This is because, it is believed that “trading in certain commodities degrades the commodities themselves” (Prichard 1984:352). It is argued that by creating a market for babies and reproductive

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36 In 1987, donors received an average of $250, and by 1997, the usual payment was close to $2500 (McGee 1997, cited in Fuller 2000: 151).

37 Commodification when broadly constructed, [I]ncludes not only actual buying and selling, but also market rhetoric, [that is,] the practice of thinking about interactions as if they were sale transactions, and market methodology [that is] the use of monetary cost-benefit analysis to judge these interactions” (Radin 1987, cited in Bridges 2002: 129).
materials the ‘priceless’ is prized. The concern with commodification of life based on the Kantian argument believes that it inherently oppresses the poor women and involuntarily draws them to a profession devoid of dignity. This is especially true in relation to egg donors and surrogate mothers as these trades in body parts and reproductive processes are thought to be obnoxious and unnatural. However, the fact that the baby also evolves as a commodity to be bought and sold in the open market is not emphasized (Cannell 1990).

It appears that though there is an acceptance of people spending money in order to have a child and literally buying a child, but the contrary that somebody is either offering her reproductive material or reproductive potential for sale is questioned. Hence there is an attempt to gloss over the process of commodification and objectification. This process of silencing and covering up of the method of commodification parallels the one of silencing the process of engineering in making and unmaking relationships. In order to combat the uneasiness with commodification, the strategy is thus to look at the notion of biowealth and biobank in the perspective of “economy of gift” (Rendtorff 2001: 58). In order to erase the wrong done by commodification, there is thus a reverse act in place of personalizing – through the language of donation and gift-giving.

Semantic Messages of Gift-Giving

This process of projection of the economic relationship in terms of affection, giving and emanating from the essence of family and kinship is noticeable in the way all the procedures with third party conception are named – Artificial Donor Insemination, IVF

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38 There is a strong argument for promoting and legalizing the sale of body parts. They argue that regulated market is morally, ethically the most viable option for procuring organs. For detailed discussion see, Castro 2003, Taylor 2005).

39 Commodification of sex and selling of other body parts like kidney and blood have long dominated the discussion of human dignity being put at stake.

40 This makes Fuller ask, “Does a significant difference exist in the commodification of some body parts, such as blood, hair or other tissues, and reproductive body parts” (2000:151). Moreover, donation of sperm, which have the same potential as that of the oocyte, has always been compensated.

41 The notion of commodification and payment in lieu of donation is seen problematic because it is believed following Simmel’s formulation of money that it removes “personal element from human relationships through it(s) indifferent and objective nature” (1978:297, cited in Ragoné 1996:356).
with Donor Egg, and IVF with Donor Sperm\(^{42}\). There is an urge in this naming to suggest that eggs and sperms are always given as an act of altruism. Forms of “semantic message” (Richardson 1996, cited in Sharp 2000: 315) play a powerful tool through which the otherwise commercial transactions located in a market place is dragged to the sphere of familial bond, concern and love. May be it is true that many ‘donors’ give away eggs and sperm\(^{43}\) or become surrogate with the motivation of helping others but the fact that this act of ‘giving’ takes place in a highly charged commercial context and often in lieu of considerable amount of money (especially in case of donor egg and surrogacy) cannot be missed out\(^{44}\). The term donation then, which is being used convincingly both in medical text books and in the language of the day to day working of the clinic, is more of a misnomer rather than being a matter of imprecision of language. The probable reason for using terms like donation and gift, which connote altruism even for transactions that are nothing less than commercial, stems from the denial in accepting the commodification of body parts. Hence the thrust is to consciously use words which rob off from these transactions the market forces that are implicit in them.

▷ Showcasing Humane Responsibility

The denial is not only rooted in the mind of the medical fraternity in the use of language and in naming the technologies but also in screening of donors. As Dr. Kakoli Ghosh-Dastidar points out:

*In screening of donor what we find out is the psychological get-up of the donor, whether she is doing this just for money or out of an urge to help another woman. While these women are commercial donors or surrogates, but the Counselor looks for those who have the urge to help.*

\(^{42}\) The terms semen provider, egg provider and “gamete transfer” (Shanley 2002) seem to be more appropriate than gamete donation or donors. As these transactions are often mediated by cash or kind even when among relatives and friends.

\(^{43}\) We have shown in the earlier chapter that even altruistic donation and surrogacy involves objectification and alienation.

\(^{44}\) Here it is timely to introduce Radin’s (1996: reprinted 2001) notion of “incomplete commodification” (2001:102) which takes into account the plurality of the situation, in which “relationships may be entered into and sustained partly for economic reasons and partly for interpersonal sharing that is part of our ideal of human flourishing” (2001:134).
In this there is a deliberate attempt by the providers to justify the act as a gesture of showcasing humane responsibly to someone who is in dire need. This glossing over the commercial aspect is not only peculiar to NRGTs but also found even in case of blood and organ donations. If we glance through the legal position on donation of body parts, blood and tissue we find that all kinds of commercial transaction is illegal. It is only through donation that blood, organs and tissues can be given. However, if we look at the ICMR guideline on ARTs then we strangely find that ova and sperm providers can be compensated if not paid for the service provided\textsuperscript{45}. Though this acknowledges the fact that this is a service being provided but the terminologies used and the practice, to an extent, still predominantly focus on the angle of altruism. The terminology of donation and gift is ostensibly floated by all the parties concerned in enabling reproduction by virtue of its "double evacatory power" (Strathern 1991: 591). In most cases, however, gift giving is as much alienating as selling as the donor neither knows who would benefit from his/her donation or whether it will be actually used. This becomes true with "charitable altruism" (ibid.) in case of sperm donation where anonymous donation takes place not for any particular recipient but for the general good of the society like a charitable act in place. The latter act of altruism, i.e., intimate altruism (ibid.) is geared towards specific recipients, and gets exemplified through egg donation and surrogacy\textsuperscript{46}. For the donors who were relatives, their gesture of donation were seen as an act of love, obligation, and being significant in someone’s life. However, for commercial donation in certain cases and all the cases of surrogacy, the act was seen as a gift and not only geared towards earning money.

In the discourse of ARTs and the economics of engineering "two models of commodification may be at work simultaneously, one more akin to Mauss’s (1954, reprinted 1974) understanding of the symbolically charged gift and reciprocity, the other to Marx’s notion of commodities as goods produced under the alienating conditions of

\textsuperscript{45}Here it is appropriate to quote Shanley who points out "the practices through which we regulate the transfer of human gametes (eggs and sperm) reflects and shapes our understanding of our relationship to our genetic material, the extent to which family bonds are created by nature and by human will and the role the market should play in forming families" (Shanley 2002: 258).

\textsuperscript{46}However, it would be wrong to believe that anonymous charitable egg donation does not take place though in this study all the recipients and donors were engaged in one to one transaction irrespective of whether they were related or commercially appointed.
capitalism” (Sharp 2000:292). Different individuals involved in this transactional exchange might thus provide competing readings of the same goods and services. It also becomes clear, even though an aggressive market is shaping individual’s private desire of being a parent, that somewhere there is still a reluctance to accept it and hence there is a deliberate attempt to construct a reality in which economic transactions and interaction are given a backseat or provided a humane face. This negation of any commercial and economic transaction is important to understand how the entire economic domain which steps in to facilitate or regulate the process of engineering is responded to, adapted and, at points of time, is itself engineered and naturalized.

II. The Cost of Engineering/ The Price\textsuperscript{47} to be Paid

Issues of Class Based Access

Middle and upper middle class, till now, dominate infertility clinics. Though economically poor people aspire to use the service, in most cases they cannot afford them. This is particularly true of procedures like IVF and other more sophisticated ones. Comparatively it can be said that IUI being available at a relatively lower price is somewhat within the reach of the economically poor. The irony of the situation stems from the fact it is on the “bodies” of these poor people that experimentation were carried on in order to evolve these technologies. As Dr. Sudarshan Ghosh-Dastidar, one of the pioneers recapitulates,

\textit{In 1981, when we were still developing the technology most of the patients we treated on were poor. They were almost used as guinea pigs. They gave us their biological body-machine for us to develop this knowledge. But the benefit of this knowledge today benefits the rich and not those who offered themselves for experimentation. We have a poor patient fund through which we try to treat them but that is not enough.}

\textsuperscript{47} Here we concentrate on the monetary cost that have to be paid. This is not to deny that quite a price has to be paid at all levels – physical, emotional, and psychological.
Though this phenomenon is neither new nor unique to the field of ART, it is unfortunate in the sense that a sizeable population is kept out of bound of these technologies or they go through unthinkable hardships to pursue these procedures.

Mechanisms to Accommodate

There are certain mechanisms in place in order to accommodate treatment seekers of low paying capability. Dr. S.K. Goswami’s of IRM talks at length of such avenues that have been developed by the clinic:

The people visiting this clinic are mainly from middle and upper middle class background. But lower class people (street vendors like jhalmutioala) also at times make an attempt to avail the services. We also provide subsidies to a fixed number of cases every month but the number of requests that we receive is way beyond what we can provide. Strangely people who are at the verge of economic breakdown are not the ones to ask for subsidy, for they somehow go through extreme pain to accumulate money. But often couples who can afford are the ones who try and manipulate subsidized treatment.

The provision of subsidy by the clinic for a limited number of patients is seen as a space created to accommodate people who would otherwise be left behind because of the their low paying capacity. However, like any other benefits and schemes, in effect, the people who have the power to manipulate utilize these miniscule positive spaces. In order to cut down per cycle cost of IVF certain innovative measures have been taken up by the clinics. The most prominent among them is the Egg Sharing Programme. But this programme also has its own sets of limitation. According to Dr. S.K.Goswami,

The egg-sharing programme that we were running earlier had been stopped as we had faced a lot of problem. To cite a case, in which 10 eggs were retrieved from the woman who cannot pay for the IVF cycle but has fertile eggs. Five eggs were transferred to the woman who gave egg but were not paying for the procedure and the one who did not produce egg but paid for her own IVF cycle and that too of the donor. Incidentally the woman who was paying got pregnant with the eggs but the woman who donated the egg did not. In this case the donor

48 New schemes also have been designed to attract foreign nationals, for e.g., a scheme announces $11,000 for a complete IVF cycle, plus drugs, for patients below 30 years. Some money will also be returned on failed attempts (Patil 2004).
failed to realize that this was just a chance factor and she accused us of using the good eggs for the woman who was paying and the bad ones for her.

These schemes are also advertised in the newspapers:

*If you are a young fertile woman, who wants to go through IVF but cannot afford the treatment, you can consider donating your eggs and registering for treatment*  
(*Hindustan Times, January 10, 2006*).

Even if we go by what Dr. Goswami has to say about it, there is no way that we can deny that there is an immense probability of unscrupulous means seeping into the field of ARTs as it handles so much money, on one hand, and the socially crafted desire to have a child, on the other hand.

Clinics, like Genomme, which caters to an upper middle class and middle class clientele, have devised creative financial management in order to smooth the process of technological intervention through tie up with banks (Genomme tied up with HSBC, for example). This “MyTerms Credit Personal Loan” comes as a support structure for the couples who go through this very expensive treatment. The caption reads, “When you’re planning for something priceless, we can help you plan your finances” (*HSBC, Advertisement Material*)49. This partnership between a service industry and a financial company is a feature that is pervading the consumerist market and the medical market is no exception to it. The HSBC pamphlet states:

*Having a baby is a decisive time. It’s also a time filled with anxiety, when all you can focus on is preparing for your little one. MyTerms Credit – Personal Loan from HSBC can be of assistance to you at this delicate time. With easy financing and repayment options, MyTerms Credit-Personal Loan can take financial worries away. So you can concentrate on what truly matters: Your child.*

49 This pamphlet is given to treatment seekers along with patient information booklet in Genomme. MyTerms personal loan offers loan to couples certified by Genomme at 14% interest for five years compared to the present ongoing interest rate of 15% (*Kolkata News Line, January 20, 2006*).
Once couples are in the infertility clinics, the cost of the treatment does not restrict itself to the procedural cost which is often communicated orally or written down in the patient's handbooks but generally goes well above it. It might so transpire that the couples who are undergoing IVF will have to shell out Rs. 70,000-1,00,000 and maybe much more depending on which clinic they are carrying out the treatment in; while IUI with donor sperm will cost only around Rs. 15,000 to 50,000. However, we would not get a correct estimate if we restrict ourselves only to the cost of any particular procedure. We should also take in consideration the fact that before a couple has been advised to go for an IUI or IVF they have already gone through a series of preliminary investigations, diagnostic and corrective procedures like laproscopy, hysteroscopy and have had, in general, hormonal drugs for considerable time period before resorting to the procedures. Though some respondents did directly approach the tertiary centers because of their nearness and awareness of the infertility clinic, others landed up after they had gone through numerous other general practitioners and local gynecologists\textsuperscript{50}. Once we take into account this cost, the economic burden on people who have been undergoing treatment for a considerable length of time is well imaginable. BL gives a consolidated amount of expenditure on treatment that they have borne in all these years:

\begin{itemize}
    \item We have spent almost 9-10 lakh in these 16 years of treatment.
\end{itemize}

Respondents mentioned that they have fished out 50 thousand to one lakh rupees and often more, depending on the years of treatment, even before they have started off the actual IVF procedure. According to PB,

\begin{itemize}
    \item We have already spent almost Rs. 40,000 on medicine and we have not yet started the procedure. There is no guarantee that if we spend another 85000, we will have a baby.
\end{itemize}

\textsuperscript{50} Even in Tain and Robertson's (2002) study on IVF patients, 20% of the patient according to patient file has been to different IVF clinics before coming to the present one. However, the researchers opine this to be an underestimate, as many of the respondents chose not to reveal their previous attempts to the staff of the clinic.
The respondents going for IVF with commercial egg donor or with surrogacy also had to compensate the donor or surrogate. In the present study the amount paid to egg donor ranged from Rs. 10,000 to Rs. 40,000. The cost of commercial surrogacy was said to be a minimum of Rs. 1.5 lakh; added to it are daily expenses of the surrogate and a monthly allowance. If we corroborate this cost along with the economic background of the respondent, however conservative such revelation might be, we find that the cost of treatment is huge. As CS, who is going for IVF-Surrogacy after repeated failure of IVF cycles, says,

*To bring her (surrogate) everyday I have to pay for her travel and food. It's almost Rs. 1000 every day. Moreover, they are not well off so I have to support her family other than the large sum that we will eventually pay her.*

To this are also added the hidden costs of travel, stay (if they are not from Calcutta or its neighbourhood) and food. As MS and SC provides a rough estimate of cost incurred:

**MS:** *We have already spent more than two lakhs just for the IVF cycles. This would not include our visits to different other clinics prior to this, cost of tests and treatment done before the procedure, our travel cost and other associated costs including stay in Calcutta and food. The latter would amount to more than a lakh of rupees.*

**SC:** *The cost of the treatment has gone well above one lakh. Apart from this we have to stay in hotel in Calcutta. Usually we stay in a hotel in Sealdah. But this time we are staying in one of the houses near the clinic, which rents rooms for Rs 200 a day so as to curtail on the commuting charges. As we have to eat out the cost of food also gets added to this. When the donor was coming for pick up we have taken care of her travel and food. Apart from that we have paid her Rs. 10,000.*

AM, who is a housewife and whose husband’s monthly income is Rs. 4,5000, brings out the hidden cost in treatment by calculating not only the cost of procedure, travel, food but also the opportunity cost that her husband bears by giving up his daily earnings while accompanying her.

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51 Providers are not directly involved in the monetary transaction that takes place between donors and recipients. Dr. Gutgutia, however, cites a particular instance where the recipient was personally known to him and hence he was aware of the monetary transaction that took place:

*They (recipient couples) paid Rs. 90000 to the surrogate when pregnant, Rs.90000 on delivery and Rs. 3000 per month for the entire period.*
If I do not get pregnant with one cycle it is very difficult for me to go on trying. I also faint at times due to low pressure. So even if I can somehow manage to come to the clinic on my own, my husband does not feel comfortable leaving me alone. This means the day he is accompanying me the shop is also closed.

Another important hallmark of taking technological assistance in reproduction is that a couple on an average has consulted more than a single doctor. The number of doctor often crossed five. Some respondents also mentioned that they have consulted “innumerable” doctors and could not recollect “how many” and “have lost count”. This continuous change of doctors also adds on to the cost of the treatment since they have to repeat all the preliminary investigations again and again as they go from one clinic to the other. Moreover, in our study, most women and men were undergoing procedures not for the first time but have gone through at least one cycle, prior to this. There were even respondents who have gone through as many as 17 IUIs and three IVF cycles. In case of repeated, unsuccessful cycles, the amount of money spent keep on rising unless the couple becomes economically exhausted for carrying out further treatment. As MS2 says,

*We don’t have count of how much we have spent. My husband says, “don’t count money then nothing will happen”. But previous to this we have 17 or more IUIs (may be more I don’t even remember correctly these days) and this is our 3rd cycle of IVF. So you can well imagine how much money we have spent.*

These two responses from AB, who is going for IUI with donor sperm, and CS, who is going for surrogacy, highlight the plight of continuing treatment.

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52 Kaplan et al (1992) by applying quantitative statistical analysis showed quite clearly that continuing treatment “beyond some threshold number of cycle is not efficacious” (1992: 1217).

53 However, this stretching of one’s economic capacity to the last limit in order to afford the expensive technology is not unique to India but is also visible in the West. As in a number of states in the West, infertility treatment falls outside the scope of insurance coverage the couples often have to pay out of their own pockets in order to meet the cost of the procedures. Pamela Madsen, the executive director of the New York Chapter of Resolve (an infertility support and advocacy group) who had two children through IVF, pours out her heart to the New York Times, “I’m tapped out, mortgaged out, credit-card-ed out. And we were lucky. We got our babies. We still live in a one-bedroom apartment. We had a nest egg when we got married; we had health insurance, and the system wasn’t there for us”. (Lang 1998: 12, cited in Conrad and Leiter 2004: 167). While the medical establishment wants to market infertility as a disease in need of treatment and couples who access the treatment also incorporate similar logic, there is a strong resistance from the insurance companies in the West to buy this logic and cover infertility treatment within health insurance. Their three main defenses are: 1. Infertility is not an illness; 2. ARTs are not medically necessary and; 3. ARTs are experimental” (Gilbert 1996:44, cited in Conrad and Leiter 2004: 167). According to Madhu Neotia, Director of Genomee, “Insurance Regulatory and Development Authority (IRDA) has said that it would talk to Indian Insurers to see if they are ready to cover infertility treatment (Kolkata Newsline, January 20, 2006).
AB: My husband works in an iron factory and earns Rs. 400 per week. When he comes to the clinic he cannot go to the factory. So there are days when we do not have any food to eat. But what to do, we cannot compromise on treatment? We do not know how we will continue treatment. Whereas, our monthly income would be less than Rs 2000 we are made to spend around Rs. 5000 every month.

CS: It is becoming economically taxing for us, as we are service holders. We have almost sold off every asset we had. We have taken a loan of Rs. 1.5 lakh. We have to also think of repaying it. We have no idea what amount of money we have spent. Whatever my husband earns is spent on the treatment.

It becomes clear that the cost of the treatment is huge and prolonged. These hidden costs along with the actual cost of the treatment, coupled with repeated treatment cycles, are enough for robbing off people’s resources once they have subjected themselves to the treatment regime. However, once they are in the clinic, it is difficult for them to discontinue treatment and every next attempt becomes one more step towards fulfilling their dreams. It becomes a never ending vicious circle which definitely has a luring entry point, but once people are into it they lose their way within it unable to find the exit.

Rationalizing Choice: Cost-Benefit Analysis

Choosing the Second Best

Economic standing does not only provide the choice of taking assistance from technology but also often becomes an important criterion for choosing between two technologies. Couples often have to rationalize a choice between IUI with donor sperm and IVF with husband’s sperm through PESA-ICSI not because of medical criteria but because the latter would easily cost them around Rs. 1 lakh compared to Rs. 5000 in IUI with donor sperm. The economical consideration becomes a hindrance or at times promotes or standardizes the craft of engineering and medical decision is guided by it.

54 A study by Goldfarb et al. (1997, cited in Fasouliotis and Schenker 1999) concluded that women who did not continue with a second IVF cycle after the failed first one, the major reason was financial.
55 Tain and Robertson’s (2002) in their study on IVF patients also talks of this “carrying on regardless” (2002:388) attitude as a quintessential feature of these treatment protocols.
57 This is the cost of one cycle of treatment. However, there is hardly any guarantee that one will conceive by going through a single cycle.
Thus, while some couples have been resistant to the idea of using donor at the initiation of treatment, the fact they are not in an economic position to choose the best procedure which will give them a biologically related child compels them to opt for the second best. Rather than opting out of the system they make themselves adaptable to use donor semen as, through this, their ultimate goal gets satisfied. Hence, to engineer family values by bringing in a donor is not at all a spontaneous choice but a choice taken in a situation where they are left with no option (as not having a child is not considered as a choice and neither is adoption). In this capitalist market economy, the choice thus is more of a compromise to particular situations constrained by their medical inability of having a biological child and their economic inability to bypass the medical inability. AS talks of this difficult choice that they had to make because of their inability to pay.

*We were asked to go for IVF but we could not, as we do not have the financial resources. Hence we had to make ourselves accept sperm from a donor. We really did not have a choice. Who on earth do not want a baby from her husband? But, it is not right to expect that everyone will be able to pay the money. Even other patients are saying that they are going for repeated cycles; some of them are going for 8/9 cycles. I do not think that is feasible for us. Let's see how we go about it. It consumes so much of time, energy and money.*

UD also reiterates the same constraint for which she had to let go her inhibition of accepting donor sperm:

*I do not know what will happen. We have spent so much money till now. In army we do not get infertility treatment free. This facility is only available in Delhi but we have not yet been posted in Delhi. The Army doctor has referred us here or has asked us to go to Delhi. Here, seeing the previous reports the doctors told that either we have to go for IUI with donor sperm or for a special test-tube baby.*

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58 This is what Marilyn Strathern calls “prescriptive consumerism” where choice exists “for the sake of choice itself” (Cited in Franklin 1990: 19) and is the quintessential feature of “enterprise culture”. Though, the term “enterprise culture” (Franklin 1990:18) was introduced in the context of “Thatcherism”, it has evolved “as a phenomenon in itself” (Franklin 1990:18). The key features are: “faith in forces of free market and the corresponding ethos of competitive individualism...promotion of active citizenship through forms of consumption, individualism and property ownership...privatization of public services and an attack on the so-called ‘dependency culture’ fostered by welfare state” (Franklin 1990:18-19).

59 The providers shared anecdotal references of this kind of rationalization. Dr. Gutgutia of Genomee recalls an interaction with a couple in this effect.

_In 2011, I had a couple having a male factor problem who said we would try for IVF-ICSI later on. But do a donor IUI now as we are in a financial crunch at the moment but there is a lot of family pressures to have a baby soon._
in which they will take out the sperm through another procedure (PESA-IVF). In this procedure they said that they would use my husband's sperm so we arranged the money somehow. But after one month I again had my period. Now they are asking to try for IUI with donor sperm. We have already spent more than two lakhs as of now. More than a lakh of rupees were only spent for IVF-ICSI. Now we do not have enough money to repeat it. So we are ready to accept donor sperm.

Here again, as in the case of AS, we find that the choice of the donor sperm is dictated by their inability to pay for the second round of treatment. Though initially they were ready to bypass only the sexual intercourse in conception and pregnancy they stretched their limits of acceptance once they realized that it would not be feasible for them to shell out enough money to repeat the procedure. It is at this juncture that they decided to use donor sperm. The readiness to accept donor sperm that UD talks about is acquired through long association with the treatment cycle and rationalizing the best situation in a given circumstance. Thus accepting donor sperm, which was initially seen to be outside the purview of acceptability, suddenly becomes normal and natural. Thus stretching of boundaries i.e., to extent one can allow intervention and normalize and naturalize it depends on one's circumstance. Though this promoted as a choice, but this is an option of choosing between the greater and the lesser of the two evils – of not having a child at all vis-à-vis using a donor.

Medical Establishment as a Partner

Even the physicians' and counselors' suggestion to couples to opt for a particular procedure is not guided by medical criteria alone but is also determined by the couples' socio-economic standing. It is far from true that in the field of ARTs all medical decisions are validated by objective scientific facts. It becomes such that, while a person who can afford is not given a choice of using IUI with donor sperm; a person who cannot pay do not have the right to have a child with his own gametes without bothering to tamper with the normative order. It is as if a person who does not have money to afford is not in the authority to have qualms on the abnormality of the procedure. On the other hand, the doctors take an extra effort for couples who have money and stress on the genetic difference that the child will carry if born from a donor. In contrast, the providers
highlight just the opposite in case of poor patients. A field entry brings out the communication between the doctor and the patient about why they should take a rational decision in going for sperm donor.

**Doctor to Patient:** *Let me tell you that your sperms are not working. If you go for IVF-ICSI that is very costly and the success rate is not 100%. It is better in your condition (socio-economic) to go for donor sperm.*

**Price vis-à-vis Prized Possession**

The notion of ‘shop till you drop’ i.e. till the point one is economically exhausted – this essence of consumer culture pervades the field of assisted procreation. Hence, even when certain respondents said that they are “neck deep in financial crunch” because of the cost of the treatment and at the “verge of being economically broke” and that they do not know “how to carry on” if they do not have a success soon, still they hardly could make themselves decide to leave the treatment.

It is believed that it is worth having a baby even at the cost of exhausting one’s economic resource and becoming a broke⁶⁰. When juxtaposed against the potential to have a child these costs are rationalized as being used for a definite purpose. As SG and ST puts it,

**SG:** *We have already spent two lakhs but still now we have not been blessed with a child. But we will keep on trying and will go till we have reached a dead end.*

**ST:** *We have spent enough money till now. But, we are planning to try till we can.*

Though these respondents feel that they have spent such huge amount of money they rationalize this cost and weigh it with having the pleasure of having a child to call their own. They also justify that their affluence is meaningless if they do not give a wholehearted try and spent their entire economic resource. This feeling of “ei paisai ke

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⁶⁰ In a study of a fertility clinic of an urban hospital affiliated to a University medical center by Judith Modell (1989), the respondents seem to weigh IVF against the money spent. They, like the respondents of the present study concluded that it is worth the money.
khabe” (who will use/eat from this money) also prods them to spend and to carry on with the treatment ‘till the last’. As MS2 says,

MS2: *We don’t think of money. What will we do with money if we do not have a child?*

It becomes evident in their phrasing that these couples will go on trying till the last moment. They calculate the cost not in terms of money spent but what it can offer in return. The only problem is that they do not know when they will reach the “last” and whether they will at all reach or not. This also creates a situation in which there is no choice where you do not try out technological assistance and your try continues till you are physically, emotionally and economically exhausted. Hence a person who does not try in this market of choice seems to fall out of the system as her/his behaviour and her desire for parenthood is questioned.

ARTs no doubt have opened out options for having a child in cases earlier unsought of. But at the same time the choice has been restricted in the sense that one cannot choose not to use the option without attracting questions regarding ones’ desirability. Moreover, while we find that there is sympathetic understanding for couple’s fleshing out money and draining economic resource to buy the prized possession – a child; they are left with almost no option of not investing in it if they have money. The economics of engineering as done by couples, donors, and the medical establishment in responding to the emerging medical market for a priceless commodity is thus a dynamic process involving choice, subordination, agency, objectification, commodification, alienation, commercialization, fulfillment, gift-giving and donation. It is through all these readings of various actors or of a single actor at various points of time that a composite understanding of how choices are made in a particular socio-economic situation is made explicit.