Mixed Blessings: Commodifying Reproduction and Consuming Assisted Reproductive Technologies

H. Rika Houston, California State University, Los Angeles

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Consuming Assisted Reproductive Technologies

H. Rika Houston, California State University, Los Angeles

ABSTRACT

Since the late 1970s, a proliferation of advances in biotechnology, coupled with an increasing demand for infertility products and services, has fostered the growth of a multi-billion dollar industry for assisted reproductive technologies (ART). This paper, part of a larger “ethnoconsumerist” study on bio-commerce, conducts an exploratory, (con)textual analysis of the ART industry from a review of historical and political texts in feminist cultural studies, medicine, and biotechnology. In doing so, it identifies several emergent themes and provides a preliminary cultural framework from which future studies of consumption and marketing surrounding this complex industry can evolve.

INTRODUCTION

On July 25, 1978, Lesley and John Brown, a young couple in Oldham, England, celebrated the birth of their daughter Louise Joy Brown (Andrews et. al 1998, Stephen 1999, Raymond 1998). Under “normal” circumstances, this blessed social event would not mark a watershed event for scholarship in consumption and marketing. However, the particular circumstances of her conception and birth would prove otherwise. Louise’s birth, it would seem, heralded the beginning of a multi-billion dollar industry fueled by the silent desperation of infertile couples around the world and revolutionized by the phenomenal proliferation of modern advances in biotechnology. Louise Joy Brown, simply stated, was conceived through an experimental biomedical intervention known as in-vitro fertilization. As a result, she has been commonly referred to as the world’s first “test-tube” baby.

Ever since Louise’s birth, there has been a proliferation of scholarship, mostly in the area of feminist cultural studies, that has examined the assisted reproductive technologies or ART industry from a diversity of cultural and social perspectives (Balsamo 1996; Casper 1995; Corea 1986; Davis-Floyd and Dumit 1998; Farquhar 1996; Franklin 1997; Hartouni 1991, 1997; Hopkins 1998; Kaplan and Squier 1999; Raymond 1998; Stanworth 1987; Strathern 1992; Terry 1997). This evolution is only “natural” since the politics of reproduction and assisted reproduction is fundamentally linked to the power relations that construct gender hierarchy in patriarchal societies. Indeed, one could argue that they tug at the very core of beliefs about nature and culture and how
gender is constructed within that discourse (Ginsburg and Rapp 1995). While a majority of these scholars point to the potential for the exploitation of women through the patriarchal control mechanism of reproductive technologies, others pinpoint the ability of such technologies to become tools of strategic resistance in the re-construction of cultural categories such as procreation, kinship, motherhood, and family. These divergent perspectives are elaborated upon in the preliminary emergent themes section of this paper.

As a major spectacle in this political debate, the evolution of the ART industry and the commodification of reproduction that it symbolizes is an important topic for consumer research and marketing. However, to date, this highly lucrative industry has somehow escaped the interest and exploration of scholarship in the major journals of consumer research and marketing. This study seeks to address this void by exploring the historical and political context of the ART industry and providing a preliminary cultural framework from which future studies of consumer research and marketing on this provocative area of bio-commerce can evolve.

RESEARCH METHODOLOGY: AN EMERGENT, ETHNOCONSUMERIST DESIGN

This paper is an exploratory study resulting from a larger study on biocommerce that utilizes an emergent, ethnoconsumerist research design. Venkatesh (1995) defines ethnoconsumerism as “the study of consumption from the point of view of the social group or cultural group that is the subject of study.” His model is based upon the notion of ethnosociology as proposed by Marriott (1990). While ethnoconsumerism is similar to the idea of an emic perspective, it goes deeper into the development of knowledge as it is constructed within a culture.

Central to an ethnoconsumerist approach toward understanding is the notion of a cultural analysis that includes both a text view and a field view. The text view, upon which the results of this particular paper are reported, is the identification and understanding of the historical and sociocultural themes of the culture as derived from the collection and analysis of cultural texts and materials. The field view, the ongoing portion of the study that has been in progress since 1999, is a descriptive account of the current practices in a culture as derived from data collection and analysis during the process of ethnographic fieldwork. Such ethnographic field work is similar to that most typically performed by anthropologists in the field. However, since the field work conducted in an “ethnoconsumerist” research approach is framed within the context of the “text view,” a more informed, contextualized view of the phenomenon under investigation emerges. In addition, with the ethnoconsumerist research approach, the text view and the field view are combined to develop a cultural framework. The cultural framework, in turn, provides the theoretical structure from which cultural categories, the concepts germane to a culture, are derived.

Data collection efforts for this study have been in progress since early 1999. The “text view” and preliminary cultural framework (of assisted reproductive technologies or ART) reported in this paper were derived from an ongoing, extensive review of cultural texts and materials related to science, technology, and medicine in
general and assisted reproductive technologies (ART) in particular. The “field view” or the results of the ethnographic field work will be reported in subsequent papers as it continues to emerge. All textual data in this paper were subsequently analyzed according to structured, grounded theory procedures according to Strauss and Corbin (1990, 1998). Ultimately, the emergent design process utilized in this paper and the larger study involves data collection through multiple methodologies including a review of historical and cultural texts, participant observation, depth interviews, the collection of cultural artifacts, and visual ethnography.

THE CONTEXT OF ART CONSUMPTION

At a macro level of analysis, the consumption of assisted reproductive technologies are part of an evolving cultural narrative about motherhood, the family, and the commodification of the female body in a culture that bears a quasi-religious belief in the power of technology to conquer “nature” (Balsamo 1996, Farquhar 1996). Within this context, the female body and more specifically the fragmented womb become the political battleground for the construction of gender through the technological management of reproduction and reproductive processes.

This argument is supported by the fact that the commodification of reproduction in the ART industry is marked largely by the manufacture and marketing of body technologies that target “infertile” female rather than male bodies as the site of constant technological intervention. Such practices continue to ring true even though approximately 40% of infertility among couples is attributed to male factors such as low sperm count and/or motility and another 20% is attributed to either unknown factors or those associated with both partners (Centers for Disease Control and Prevention 2001, Stephen 1999).

Since the birth of Louise Joy Brown, the assisted reproductive technologies (ART) industry has grown from the relative obscurity of a science fiction spectacle to the celebrated status of a commercial success story. Indeed, the biomedical innovation that made Louise’s birth possible has now become commonplace. Since 1978, for example, over 300,000 children have been created by this “standard” in vitro fertilization procedure (Kowalski 2000). The cocktail of other ART products and services have proliferated from this “standard” in-vitro fertilization procedure to include gamete1 intrafallopian transfer (GIFT), zygote intrafallopian transfer (ZIFT), cryopreservation of sperm, eggs, or gametes, IVF with intra-cytoplasmic sperm injection (ICSI), artificial insemination by donor (AID), third party contractual arrangements (surrogacy), advanced super ovulation drugs, sperm sorting for sex selection, and pre-implantation genetic diagnosis, to name just a few (Lemonick 1997, Rosenthal 1995, Sher et. al 1998, Stephen 1999).

From a consumer’s perspective, these products and services are the long-awaited answer to the perceived heartbreak of infertility. Infertile couples can now choose more than a dozen ways to try to have a baby. Even better, thanks to the evolving wonders of modern science, the future possibilities seem endless. From a

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1 Gametes are unfertilized eggs and sperm. Zygotes are fertilized eggs. Embryos are more mature fertilized eggs in which the process of cell division has progressed to the two or four-cell stage (Rosenthal 1995, Sher et. al 1998).
marketer’s perspective, it is a capitalist dream come true. Infertility, the inability to conceive after one year of unprotected sexual intercourse, has grown at a rate of approximately 10% since 1988. Today, it is estimated to affect approximately six million individuals and about one in six couples in the United States alone (Andrews et al. 1998, Kershner 1996, Lemo 1997, Stephen 1999). With the total realized cost of “standard” IVF treatment ranging anywhere from $50,000 to $150,000, the business of infertility is a lucrative one for the army of physicians, pharmaceutical companies, genetic screening laboratories, medical equipment companies and countless other entities that profit from its overwhelming success. Even more importantly, the growing legions of well-educated, upper-middle class consumers who are willing and able to invest such large sums of money in the pursuit of a family make the future possibilities of financial success seem limitless. The fact that the drugs and procedures utilized in the ART industry are largely experimental does not seem to deter these anxious consumers. And furthermore, in spite of the high potential for multi-faceted exploitation, the industry to date still remains relatively unregulated (Andrews et al 1998). And thus, it is within this complex and convoluted political context that ART consumption is challenging our notions of procreation, kinship, motherhood, and family in postmodern American culture (Ginsburg and Rapp 1995).

PRELIMINARY EMERGENT THEMES

A review of the cultural texts related to assisted reproductive technologies provides a preliminary, technological gaze at the complex issues and concerns that construct this dynamic, multi-billion dollar industry. On one hand, the consumption of ART products and services generate considerable emotional, financial, and medical challenges upon its nonetheless eager consumers. This “mixed blessing” of benefits tempered by risks is complicated by the paucity of regulation in the face of increasingly complex social, legal, and ethical issues. In spite of this “Wild West” of legal gaps and disparities, the consumption of ART products and services holds the transformative potential to displace established cultural categories about kinship and motherhood and re-construct them in the spirit of liberatory consumption (Firat and Venkatesh 1995).

Mixed Blessings

The dilemma of involuntary infertility can undoubtedly have a strong emotional, financial, and medical impact upon a woman and her family. At the emotional level, the “infertile” are described as sharing the usually negative but potentially positive characteristic of “desperation.” Television, newspapers, magazines, and radio have a considerable role in constructing this image, but so do the consumers who choose to adopt it. This point of contention is revealed by Pfeffer (1987, p. 82), “it seems that once you find yourself involuntarily childless, all other identifying marks are washed away…the word desperation or some such synonym appears so frequently in conjunction with infertility that sometimes it appears that what troubles infertile men and women is not the absence of a child as such but some form of emotional disorder related to their failure.” After making the life-altering decision to become a parent in the first place, the inability to do so after repeated attempts appears to
contribute to a slow downward spiral of emotions, self-doubts, and self-imposed definitions. Repeated social interrogation by well-meaning family and friends does not help the matter either. Infertile women, already burdened by self-doubts and feelings of “desperation,” often express resentment at the public expectation that they should justify their single-minded desire to become mothers or explain in painstaking detail their private attempts to overcome infertility (Kirkman 2001, Wischmann et al. 2001). Ethnographic interviews of in-vitro fertilization consumers conducted by Franklin (1997) also revealed the overwhelming desperation and uncertainty experienced by female ART consumers. These consumers, having taken for granted their abilities to bear children only to suddenly discover a verdict of infertility, bemoaned the fact that IVF treatment “just takes over your life.” This verdict opened up a “gap” separating themselves from the lives they had expected to lead and the ones they now were forced to lead. It also opened up a number of “gaps” in relation to their marriages. Infertility, in short, presented a disheartening obstacle to the “natural” life progression from marriage to parenthood to family that they had once anticipated earlier in their lives. With such a heavy emotional burden, it is easy to understand the psychological motivation for such consumers to pay large sums of money for the growing cocktail of ART products and services in the infertility marketplace.

While all infertile consumers do not choose to pursue technological intervention, the high price tag associated with assisted reproductive technologies imposes a strong financial impact on the lives of their potential consumers. Accurate cost estimates for ART procedures are difficult to obtain due to limited regulation and wide variations in cost associated with factors such as the age of the mother and the complexity and duration of the required treatments. However, “standard” in-vitro fertilization (IVF) treatments alone can average around $8,000 to $10,000 for the first cycle to a total of $50,000 to $150,000 for a series of cycles resulting in a successful pregnancy and a live birth (American Society for Reproductive Medicine 2002, Kershner 1996, Moore 1996, Stephen 1999). Additional procedures, usually necessary when the infertile consumer is a woman over the age of 35, often add thousands of dollars to these average costs. A financial cost versus benefit analysis of the ART procedure price tag presents a perplexing question that can only be explained by the deeply embedded psychological motivation that potentially drives such consumers. The latest statistics from the Centers for Disease Control and Prevention (2001) indicate that the average success rate for ART procedures conducted in the United States has dramatically increased to a rate of only 25.2%. However, since a woman’s age is the most important factor affecting the chances of a live birth without a donor egg, there are dramatic differences in ART success rates by maternal age. In general, the success rates decline with each year of age after the age of 30. Specifically, however, the average ART success rate for women aged 38 to 40 using their own eggs is only 18%. For women aged 41 to 42, it is only 10% and for women aged 43 or older, it is a mere 5%. Stated in reverse terms, the average ART failure rates for these same age groups would be 82%, 90%, and 95%, respectively. Therefore, the overall average ART success rate of 25.2%, in truth representing an average failure rate of 74.8%, can be misleading to the hopeful infertile consumer even
when the financial investment does not prove to be an effective deterrent. Coupled with the fact that ART products and services are one of the few types of health care services that are not covered by the majority of health care insurance companies in the United States, it is very clear that the target market for such products and services is the growing number of highly-educated, upper middle-class consumers, most of whom have delayed childbearing until their late 30s and early 40s to establish their professional careers. While many other consumers, presumably from lower socio-economic classes, may need such products and services, they are clearly barred from the burgeoning infertility marketplace due to its formidable financial barriers.

Even after the emotional and financial challenges are confronted, the successful outcome of a healthy baby, preferably one that is genetically related to both the mother and the father, can still present a “mixed blessing” for ART consumers. This quandary emerges due to the growing list of potential medical complications associated with ART products and services. First and foremost, pregnancies facilitated by ART consumption are more likely to result in multiple births (Seifer et. al 2001). The rationale for this outcome is relatively simple. Since the cost of ART procedures is high and the ultimate goal of assisted reproduction is a successful pregnancy and a live birth, a common practice is to transfer multiple embryos into the uterine cavity with the hope that at least one will implant successfully (Schieve et. al 1999). The overall result of this common practice is a dramatic increase in the number of multiple births since 1980. The Centers for Disease Control and Prevention (2000) and The National Center for Health Statistics (1999) reported that from 1980 through 1997, the annual number of twin births rose 52% while the annual number of triplet or higher-order multiple births rose over 400%. While the birth of twins or triplets would seem to be the ultimate blessing in disguise, especially for a woman who has tried to get pregnant for years, multiple births such as these are at considerably greater risk for medical complications. Compared to singleton births, for example, a twin is seven times more likely and a triplet is over 20 times more likely to die in the first month of life. Premature birth, which occurs in 50% of twin pregnancies and 90% of triplet pregnancies, is associated with an increased risk of respiratory distress syndrome, intra-cranial hemorrhage, cerebral palsy, blindness, deafness, low birth weight, and neonatal morbidity and mortality. Maternal complications of multiple gestations only complicate the matter. They include premature labor, placental abnormalities, maternal hemorrhage, pre-eclampsia, gestational diabetes, anemia, and other complications resulting from the cesarean birth that is standard practice with multiple gestation (American Society for Reproductive Medicine 2001). A further complication results from the moral minefield created by the attempt to improve the odds for a successful live birth in the case of a multiple gestation created by ART procedures in the first place. If three or more embryos implant in the uterus from any ART method, many doctors commonly recommend a medical procedure known as fetal or selective reduction (American Society for Reproductive Medicine 2001, Kowalski 2000, London 2001, Rosenthal 1995). This process, also used for the abortion of a fetus diagnosed with congenital abnormalities, involves the abortion of one or more potentially healthy embryos to increase the survival
chances of the remaining embryos. In addition to the dilemma of multiple gestation, other ART procedures present considerable medical risks, some of them not yet known due to the lack of long-term studies (Andrews et al. 1998). One relatively new ART procedure, intra-cytoplasmic sperm injection or ICSI, is used in dealing with male-related infertility caused by sperm function or motility. With ICSI, a single sperm is injected directly into an egg and then the embryo is transferred into the woman’s uterus using the standard in vitro fertilization (IVF) procedure. The ICSI procedure improves the odds for a successful pregnancy and live birth to an average of 32.3% compared to the non-ICSI rate of 29.9% (Centers for Disease Control and Prevention 2001). However, that slight improvement does not come without questionable risks. Early studies, inconclusive to date but still cause for concern, show that children born as a result of the ICSI procedure are twice as likely to have major congenital abnormalities as children conceived “naturally” (Andrews et. al 1998, Kowalski 2000, Stephen 1999). The most troubling unanswered question, however, is whether or not the ovulation drugs used by millions of infertile female consumers will increase their risk of developing ovarian cancer later in life (Hesselberth 2000, Kershner 1996, Kowalski 2000). Although there still has not been any conclusive cancer research related to the hyperstimulation of ovaries with ovulation drugs, the Food and Drug Administration now requires many fertility drugs, such as Perganol, Clomid, and Gonal-F, to carry a warning that they may increase the risk of ovarian cancer. In summary, the multi-faceted combination of emotional, financial, and medical challenges involved with the consumption of ART products and services produces a “mixed bag” of “mixed blessings” where the risks often call to question the potential promise of an actual baby.

The Wild West

Dresser (2000) discusses how the laissez-faire approach to ART commerce has justifiably been referred to as the “Wild West.” Concerns about the growing list of ethical issues, the high potential for human error, and the complex legal dilemmas created by ART commerce are just a few of the reasons she cites. Such concerns would indisputably call for regulation of this “Wild West” of an industry, but the paucity of such regulation points to the complexity of legislating reproduction in such a highly dynamic and lucrative niche market. And judging by the proliferation of new applications to assisted human reproduction, the myriad of moral, ethical, and legal dilemmas only promises to become more complex. For example, while new drugs and medical equipment are systemically regulated by the Food and Drug Administration, no similar review of innovative ART procedures is required (Andrews et. al 1998). And, as mentioned earlier, only certain ovulation drugs must be approved by this key governmental agency (Hesselberth 2000, Kershner 1996, Kowalski 2000). In addition, medical malpractice litigation, which effectively performs as a quality control mechanism in other areas of health care, does not work well in the ART industry because of its high endemic rate of failure. In the absence of clear, legally enforceable ethical standards of practice in the United States, each ART program has a virtually free rein constrained only by the patchwork quilt of regulations that vary widely from state to state. Advocates of increased regulation cite gaps in the existing
regulatory system and the limited impact of professional guidelines (Dresser 2000, Shanner and Nisker 2001). For example, abuses such as those involving the disposition of abandoned embryos continue to occur despite the existence of voluntary guidelines by the American Society for Reproductive Medicine (1996a, 1996b, 2000). These same advocates also argue that financial conflicts of interest influence policy and practice decisions by professional organizations and infertility clinics. Even further debate centers upon the role of government decision makers in setting public policy about the ART industry.

As part of this ongoing debate, several attempts have been made to establish guidelines regarding the commercial application of assisted reproductive technologies. Fourteen years after the birth of the world’s first test-tube baby, the Centers for Disease Control and Prevention Division of the U.S. Department of Health and Human Services successfully implemented The Fertility Clinic Success Rate and Certification Act of 1992 (Centers for Disease Control and Prevention 1999). Although this model certification program is voluntary for participating states, its results provide the public with comparable information concerning the effectiveness of infertility services. They also assure the quality of such services by providing for the certification of embryo laboratories. One of the primary features of the model program is that it requires each ART program to annually report its pregnancy success rates to the Centers for Disease Control and Prevention (CDC), along with the identity of each embryo laboratory used by the program, whether it is certified by the CDC or not. Each year since 1997, the results of the reporting under this legislation have been published with full disclosure and publicly disseminated throughout the United States. It is the first national attempt to give consumers accurate, comparable data in order to make informed choices about the vast array of ART programs, products, and services they seek to consume. In addition, the American Society for Reproductive Medicine, the leading non-governmental professional organization, and RESOLVE, the leading consumer advocacy and education organization in the infertility industry, publish numerous books, booklets, and fact sheets to help consumers make informed choices about ART procedures and costs (American Society for Reproductive Medicine 1996a, 1996b, 2000, 2001, 2002; Duka and DeCherney 1994). These steps are clearly a move in the right direction. However, genuine informed consent should require that the patient or patients be told of all the risks, benefits, and alternatives of any medical treatment. Ideally, ART clinics should be required by federal law to disclose success rates, costs, duration of treatment, embryo disposition options, risks of infertility drugs, risks of multiple births, and the potential medical problems of the resulting offspring (Andrews et. al 1998, Daar 1997, Vukadinovich 2000). Another federal attempt at regulating the ART industry comes in the form of the Equity in Fertility Coverage Act of 2001 that is currently under debate in the U.S. Congress (Dresser 2000). The purpose of this Congressional bill is to assure equitable treatment of fertility and impotence in health care coverage under group health plans, health insurance coverage, and health plans under the Federal employees’ health benefits program. If successfully implemented, this federal legislation could become a role model for individual states attempting to draft similar legislation regarding the
coverage of (in)fertility treatment under health insurance plans. At the current time, only fourteen states provide some type of infertility coverage, but coverage in all cases is severely restricted to certain types of procedures and only ten of those fourteen states choose to mandate such restricted coverage (American Society for Reproductive Medicine 2002, 2000).

Considerable controversy continues to center around the myriad of issues that emerge from third party reproduction (American Society for Reproductive Medicine 1996a, Andrews et. al 1998; Daar 1997, 2001; Dresser 2000, Edwards and Wallach 2000; Shanner and Nisker 2001, Sher et. al 1998). Third party reproduction is the catch-all term used to describe the cornucopia of ART product, services, and results that include donor eggs, donor sperm, donor embryos, and surrogacy. Surrogacy, arrangements in which a woman contributes her eggs and/or carries a pregnancy for an infertile person or couple, has the strong potential for exploitation from the perspective of all parties involved (Hopkins 1998, Kaplan and Squier 1999, Stanworth 1987). A similar logic exists with the use of donor eggs, sperm, and embryos. Informed counsel, careful psychological and medical screening, and written legal consent in advance of any procedures for all involved participants is recommended in all cases but again is not mandated by law. The first official surrogate pregnancy in the United States occurred in 1985 and the application of other procedures such as the use of donor eggs, sperm, and embryos have followed in suit. Since that time, a number of high profile, landmark fertility cases such as the “Baby M case” and the “Anna Johnson case” have ensued (American Society for Reproductive Medicine 1996a, Hartouni 1991, Hopkins 1998, Schwartz 1994, Sher et. al 1998, Stanworth 1987). As these legal dilemmas continue to mount, third party reproduction emerges as a complex social, ethical, and legal issue with many unanswered questions. In the end, there is a long list of challenges and controversies that may delay the comprehensive taming of “the Wild West” of the ART industry. The underlying message thus becomes “buyer beware” for the growing numbers of ART consumers making choices without accurate, comparable information about the considerable risks they are about to undertake for themselves, their families, and their potential children.

Postmodern Parenthood

Fueled mostly by the controversies surrounding third party reproduction, one of the most provocative themes emerging from a (con)textual analysis of ART consumption is the promise of a cyborgian transformation of established cultural categories (Balsamo 1996, Hartouni 1991, Hopkins 1998, Stanworth 1987). While the “mixed blessings” inherent in the “Wild West” of the ART industry present considerable risks and challenges for all involved consumers, it seems, the potential for using such products as sites of resistance about cultural categories such as procreation, kinship, motherhood, family, and even personhood presents an exciting area for consumer research.

The tenacious pursuit of genetic parenthood when alternatives such as adoption are readily available underscores the importance of genetic relationships in Western cultures. Stanworth (1987) discusses the importance of such “blood ties” as a powerful cultural theme among Western societies such as the United
States. “Blood ties,” a symbol of permanence in human relationships, becomes inseparable from “family” in the minds of many Westerners. As a result, every manifestation of our cultural belief systems from inheritance laws to the perceived “genetic” characteristics of intelligence emphasizes the idea that a “genetic connection” is an indisputable element of identity. As further noted by Franklin (1997), a child is considered to be a “natural” product of the procreative, conjugal actions of its parents. Therefore, a child embodies equal genetic contributions from each of its parents. Today, however, reproductive technologies have blurred the indisputable distinction between conjugal (sex) and consanguine (blood) relationships that have traditionally defined our cultural notions of a “family” (Gray 2001). Indeed, it may be difficult to establish “genetic” parenthood when there may be as many as five people involved—a sperm donor, an egg donor, a gestational mother, and the infertile woman and man (contractual parents) who intend to become the social parents of the resulting child (Stephen 1999). In short, the same technologies that enable some infertile people to become “genetic” parents ironically threaten to de-legitimize genetic parenthood and our long-standing cultural notions of the importance of “blood ties.”

Since the cornerstone of our notions of “family” and “genetic parenthood” is motherhood, any discussion of “blood ties” must address this seemingly sacred cultural institution. Who is a mother? Will the real mother please stand up? In the context of assisted reproductive technologies, motherhood as a unified biological process is effectively deconstructed (Stanworth 1987). In place of mother, we now have the technologically mediated reality of genetic mothers (who supply the eggs), gestational mothers (who supply the uterus), and social-legal mothers (who supply the nurturance) (Balsamo 1999, Stanworth 1987). Before the advent of ART commerce, one woman performed the socio-biological task of all three of these “mothers,” but now we live in a muddled existence marked by what Balsamo (1999) refers to as “the technological fragmentation of maternity.” We are even facing the dawn of the artificial womb that promises to take biological motherhood to an entirely different realm (Davis-Floyd and Dumit 1998, Kaplan and Squier 1999).

While many feminist cultural critics of assisted reproductive technologies point to their potential to exploit and devalue motherhood, and therefore womanhood, others point to their potential to liberate our notions of those same institutions (Baker 1996; Bassin et. al 1994, Corea 1986; Farquhar 1996, Ginsburg and Rapp 1995; Hartouni 1991, 1997; Raymond 1998; Schwartz 1999; Stanworth 1987; Terry 1997). Stanworth (1987) elaborates upon the fact that the technological possibilities created by assisted reproductive technologies coexist with a powerful ideology of motherhood as the natural and ultimate goal of all “normal” women. According to this traditional ideology of motherhood, however, all women want children but some women are expected to forgo motherhood “in the interest of the child.” The latter category includes single women, lesbians, post-menopausal women, and disabled women.

It is within this contested cultural space of “other mothers” that assisted reproductive technologies may offer their most promising potential for liberatory consumption and the re-
construction of cultural categories such as procreation, kinship, motherhood, and family (Baker 1996). For example, Baker’s (1996) discussion of lesbian strategies for making families highlights the potential to use relatively low-tech assisted reproductive technologies in the form of a sperm donation facilitated by a turkey baster to effectively reduce the role of the “father” to the contents of a jar. In this case, a lesbian couple creatively uses reproductive technologies to construct their own notion of a “family” with their own notion of a “genetic” relationship. Heterosexual sex is rendered extraneous to the process of procreation and the cultural categories become a fluid space open to negotiation. While most depictions of third party reproduction efforts involving surrogacy construct an image of victimization, such efforts also present opportunities for liberatory consumption (Baker 1986, Firat and Venkatesh 1995, Hartouni 1997, Raymond 1998, Stanworth 1987). In surrogacy, both the surrogate and the infertile woman are symbiotically engaged in the production of a pregnancy and a baby. Whether it is intended or not, this symbiotic relationship serves to displace male authority and upset the imbalance of the heterosexual marital contract. The resulting displacement again produces an opportunity to re-construct our notions of procreation, kinship, motherhood, and family. More recent assisted reproductive technologies such as the use of donor eggs and the cryopreservation of embryos present similar opportunities for the re-construction of identities and cultural categories in the spirit of liberatory consumption (Firat and Venkatesh 1995).

MAPping the commercial frontier of assisted reproductive technologies: a preliminary cultural framework

As illustrated in the preliminary themes that emerge from a review and analysis of the cultural texts regarding assisted reproductive technologies, the manufacture and marketing of ART products and services calls to question the cultural categories about kinship, motherhood, and family that are deeply embedded within our society (Balsamo 1996, Hartouni 1991, Hopkins 1998, Stanworth 1987). By doing so, the application of such technologies reveals the active role of consumers in constructing the meaning of products through strategies of resistance and accommodation (Arnould 1989, Penaloza 1994, Sherry and Camargo 1987, Venkatesh 1995). It also reveals the liberatory potential of consumption when infertile consumers choose to re-appropriate the means of production and reproduction through the very mechanisms that initially excluded them (Firat and Venkatesh 1995).

In Figure 1, a preliminary map of the commercial frontier of assisted reproductive technologies, we begin to identify the primary actors involved in the production and consumption of ART products and services as revealed by this exploratory study. Encompassing the themes of mixed blessings, the Wild West, and postmodern parenthood, a cultural framework of ART commerce highlights the complex social, ethical, and legal issues that it embraces. Accordingly, the preliminary themes identified in this study and illustrated in Figure 1 provide an important starting point for future research. In doing so, it helps us begin exploring the provocative commercial frontier of the
ART industry. It also helps us to begin understanding how that frontier transgresses the problematic boundaries between “nature” and “culture” as we have come to define it. And ultimately, this cultural journey provides us with the opportunity to gain a deeper understanding of the political, social, and cultural construction of gender through the technological gaze of assisted reproductive technologies.

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H. Rika Houston is Assistant Professor in the Department of Marketing, College of Business and Economics, California State University, Los Angeles, 5151 State University Drive, Los Angeles, California U.S.A. 90032-8127, hhousto@calstatela.edu.