

New Fashioned Families: An Investigation of Bonding with Families Created Using Assisted Reproductive Technology and Surrogacy

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Abstract: This paper looks at the bonding process that is unique to the population of families created via assisted reproductive technology. A pilot study of parents, surrogates, and intended parents from four families was conducted via interviews using a phenomenological interview process, and in some cases, the subjects were also administered the Maternal-Infant Bonding Survey (MIBS) that identifies bonding disruptions. MIBS specialist, Dr. Antonio Madrid, determined results from the MIBS.

Keywords: family systems, bonding, parenting

Humans are the only mammals who willingly procreate through means other than physical male/female sexual congress. Since 1978, through in vitro fertilization (IVF), it has been possible to fertilize embryos in a laboratory and have them implanted into a woman for gestation and birthing. This woman may or may not be the biological mother. Research has demonstrated that all mammals thrive when bonding occurs (Klaus, Kennell, & Klaus, 1993). Planned infants show higher levels of cognitive capacity and attachment to their mothers than unplanned infants (Chamberlain, 1998). New Fashioned Families, in which children are conceived using Assisted Reproductive Technology (ART) and/or surrogacy, have a very conscious component in the creation of a child. These children are highly planned. Much of the consciousness goes to the medical means of creation, but is there spiritual consciousness, or consciousness from the heart that influences bonding? Does the “primal wound” (Verrier, 1993) of separation from the gestating mother play a role

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with these children? What is the relationship of a parent to an egg donor, sperm donor, or surrogate? Does this influence bonding? What is the relationship of a surrogate to the baby and intended parents? Does this influence bonding at birth? Do doctors and fertility specialists address any of these concerns? Is there a collective consciousness involved in the creation of these children that influences bonding?

This paper aims to begin answering some of these questions through a literature review presenting current pre- and perinatal theories on intelligence, consciousness, communication, and bonding, as well as the results of a pilot study. Four families that fit the *New Fashioned Family* concept were given phenomenological interviews of up to one hour either in person or on the telephone with as many of the adults in each family as possible. Most of the subjects took the Maternal-Infant Bonding Survey (MIBS) to identify bonding disruptions that can affect a child's health. The MIBS was reviewed by bonding disruption specialist, Dr. Antonio Madrid.

Literature Review

The theory that prenatates and babies up to three years of age have no memory or little ability to think and feel has been proven incorrect in recent years. Babies are now known to be intelligent, sentient beings with mental and emotional vulnerability (Chamberlain, 1998). Brain activity starts at six weeks after conception, and at twenty-eight weeks the fetus's brain cortex is working (Wirth, 2001). The cortex receives impulses from vision, touch, and hearing, and at twenty-eight weeks the fetus can respond meaningfully to these sensory experiences (Wirth, 2001). Infants have a memory for stories or music they heard repeatedly throughout their fetal life (Klaus et al., 1995).

The gestational mother has a huge impact on the child before and after birth. Everything she thinks, feels, and does shapes the growing fetus within. It is impossible to hide one's feelings or thoughts from the baby in the womb (Chamberlain, 1998; Wirth, 2001). The way a pregnant woman moves and paces herself throughout her day is a form of behavioral communication. Excessive and continual stimulation can have adverse stressful effects. The fetus is sensitive to subtle emotional nuances and reacts to emotions that are large, such as love or hate, but also to more complex feeling states such as ambivalence and ambiguity (Verny & Kelly, 1981). Prenatal experiences have a great impact on the physiological system of the fetus. The stress response as well as other neuropeptides of the emotional system of the fetus can be adversely affected (Gerhardt, 2004). When stress levels rise to a certain degree there is increased production of cortisol in the body. At high levels cortisol can affect the

prefrontal cortex, which is vital in controlling the fear reactions of the amygdala (De Bellis as cited in Gerhardt, 2004).

Bonding is central to healthy development of a baby and its parents. Bonding is the intense physical, emotional, and spiritual connection between a parent and child (Madrid, Skolek, & Shapiro, 2006). Bonding begins in utero, if not before, and continues after the birth. Bonding is the foundation for the infant's later ability to attach and form a sense of self (Klaus et al., 1995; Madrid, et al.2006). Bonding disruptions can occur if the mother or father experiences a traumatic interference such as loss, moving to a new town, recent miscarriage, abortion, or physical stress (Klaus,et al.,1995). When bonding does not occur the baby often seems colicky, difficult to comfort, resistant to cuddling, and in some cases may develop asthma (Madrid et al., 2006). Attachment may be compromised. The first hours after birth often have the greatest significance in bonding, but bonding can occur in the weeks subsequent to birth as well (Klaus et al., 1995).

A father's love is just as complex and important as a mother's (Verny & Kelly, 1981). Gerhardt (2004) explains that babies need a caregiver who identifies with them so strongly that the baby's needs feel like hers. Gerhardt (2004) postulates that anyone can do this if there is an intense identification with the baby's feelings. Bonding also includes developing emotional regulation through responding to the baby's feelings and needs non-verbally. Manifestations of bonding may include facial expressions, tone of voice, and touch as forms of communication. Holding, rocking, engaging, and mirroring include ways of witnessing and acknowledging a baby's needs. By providing this kind of recognition to a baby the 'self' is brought into full being. Parents can do this by following the baby's lead and taking cues by observing the baby's moods and desires (Gerhardt, 2004).

Can conception and separation from the gestational mother influence bonding? Sonne (1997) suggests a psychogenetic communication that is an inherent and intangible ingredient of the baby from the moment of conception. The baby is conceived mentally as it is being conceived physically. Sonne theorizes that conception will prenatally and postnatally influence all of the baby's post-conception experiences, including the baby's relationship with himself, others, and God (Sonne, 1997). In discussing this psychogenetic communication, Sonne (1997) asks, "What happens when a child is conceived?" "What does conception mean?" "Does it matter to the baby how it was conceived?" "Was it welcomed?"

Verrier (1993) considers the connection between a child and its biological mother to be primal, mystical, mysterious, and everlasting. She sees the significance of this bond in the increasing numbers of adoptees

and birthmothers who are searching for one another, and refers to this broken bond as “the primal wound.” Verrier’s work focuses on adoption, but if we consider her thinking in regard to ART and surrogacy, we have to question who the bonds are with. Is it the egg donor/biological mother, the gestational/surrogate mother, or the intended parents? It is hard to know as there is so much contributed via both genetics and in utero experience. Verrier (1993) does not believe it is possible to sever the tie with the biological mother and replace her with another primary caregiver without psychological consequences for the child. We must presume Verrier is referring to a gestational mother in this instance.

It may be possible through heart felt electromagnetic field communications that the intended mother or father could be creating bonds with the fetus. Researchers at the Institute of Noetic Sciences study how the heart communicates with the brain and throughout the body via electromagnetic field interactions. The heart generates the most powerful and extensive rhythmic electromagnetic field, which permeates every cell in the body. A person’s emotional state is transmitted through the body to the heart’s electromagnetic field. Sustained positive emotions give rise to a mode of functioning called “psychophysiological coherence” which is seen in the increased efficiency and harmony in the body’s systems, reduction in internal mental dialogue, reduced perception of stress, increased emotional balance, and enhanced mental clarity, intuitive discernment, and cognitive performance.

These researchers have found the ability for one person’s brain-waves to synchronize to another person’s heart. Energetic communication via the heart field facilitates development of an expanded consciousness in relation to our social world (McCraty, Atkinson, & Bradley, 2004). This phenomenon could pertain to a form of communication with the unborn child. It is possible that intended parents, surrogates, and perhaps even the egg/sperm donors for New Fashioned Families might engage their consciousness toward the incoming baby to welcome it and continue to communicate with it during the pregnancy and birth.

The last three months of the pregnancy are the most optimal for intra-uterine bonding (Verny & Kelly, 1981). Wirth (2001) encourages talking and singing to the fetus. While he writes this suggestion for the gestational mother, it could include all of the intended family members. Adults need not be limited to communicating with their baby with formal language (Chamberlain, 1998). Thinking, visualizing, meditating, observing, vocalizing, listening, and moving/dancing are all forms of communication that are universal. These forms of communication are in the realm of theta and delta brain-waves. These are the same brain waves that babies experience most often (Bell & Fox & Laibow as cited in McCarty, 2009). These brain states are associated with deep creativity,

hyper-learning, and hypnotic suggestibility (Laibow as cited in McCarty, 2009). Klaus, et al. (1995) remind us that humans are highly adaptable and that there are many routes to bonding and attachment.

The Study

In this study, a New Fashioned Family is defined as one that has employed either in vitro fertilization (IVF), artificial insemination, or surrogacy to create a child. The parents who raise the children are referred to as *intended parents* (IPs). A *gestational mother* is one who carries the baby and births the baby but is not necessarily biologically related to the baby. A *surrogate mother* is one who carries the baby, may or may not be biologically related to the baby, and is generally compensated by the intended parents. Due to legal pressure, surrogate mothers have increasingly become pregnant via IVF and have a donor's fertilized eggs implanted into their uterus so that there are no biological or legal rights to the child

Four families who were referred or self-volunteered took part in phenomenological interviews of approximately one hour. Interviews were conducted in person or by telephone. The families include one single mother by choice, one heterosexual couple, one gay couple, and one lesbian couple.

One set of twins was born via IVF egg and sperm donors to their gestational intended mother, one baby was born via surrogate and IVF with the intended parents egg and sperm due to the intended mother's partial hysterectomy, one baby was born via surrogate and IVF using an egg donor and the intended fathers' sperm, and one baby was born via surrogate using the surrogate's egg and a friend's sperm via sexual coitus due to the intended mother's menopausal status. The surrogate and biological father in this latter scenario were good friends with the IPs and had been romantically involved on and off.

The twins were born via planned caesarian section in a hospital due to transverse presentation of one of the babies. The gestational mother requested that no screen be used to separate her from the babies during the procedure. A doula was part of the childbirth team. One baby was born vaginally via requested epidural and ob/gyn-ordered pitocin. Two babies were born via natural vaginal delivery with midwives and either a doula or birth coach present in birthing centers. One of these babies was born in a water birth. All but one baby was breastfed. All but the caesarian section twins were held in close contact by either the surrogate and/or the IPs for extended time in the first hours following the birth. All of the babies were born healthy although one of the twins spent time in the NICU due to temperature regulation issues. One baby has experienced some language

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and movement delays that have successfully been addressed with appropriate therapies.

Tables 1 and 2 below provide more details regarding relevant prenatal and perinatal information in this study.

Appendix A Table 1 Prenatal Information

New Fashioned Families

Child	Intended Parent(s) (IP's) Mother =IM Father =IF	Method of Becoming pregnant	Biological and Birth relation to Egg/sperm	Egg/sperm Donor's Relation to IP's	Rituals/special events at implantation	Surrogate's Intra-uterine Communication with fetus	IP Intra-uterine Communication with fetus	Birth	IP's Present at birth
Isme	Bonnie & Giselle	Friends of surrogate mother/father	"destiny" (quoted by surrogate mother)	Friends & needed to be part of their lives.	No. IPs did a lot of talking about how they would be a family post conception.	Yes. Surrogate talked to fetus about her IMs and what to expect after birth.	IM touched belly at some prenatal appts. Ultra sound very powerful impact on reality of situation.	Natural vaginal midwife & sister as birth coach. Father present.	One IM arrived shortly after the birth.
Elaine	Reid & Dan	IVF anonymous egg donor & IP's sperm	Egg donor is open to contact at age 18.	Friends & professional surrogate	Surrogate had henna tattoos of fertility & protection symbols & ate French fries to ground energetically. Photos.	Yes. Tone more like "a babysitter than a mother." Let fetus know she would be loved so much by all.	IPs present @ implantation & made tape of their voices reading favorite stories. Tape played by surro. Every other day @30 wks on.	Natural vaginal water birth w/ midwife, doula, surro's mother and IP's participating	Yes. One IF was in the water tub & the other was outside the water. Both held baby as birthed.
Penny	Chystie & husband	Surrogate IVF with IM egg & IF sperm	Biological parents	Friends & professional surrogate	No.	"As she would in any other pregnancy" (surrogate has 2 of her own children)	IM attended prenatal appts./ weekly lunches w/surro & talked to baby via belly "Mommy can't wait to see you!"	Requested epidural /piocin ob/gyn friend as support, IP's present	Yes
Sasha/Fred	Ellen gestational mother of twins	IVF anonymous egg & sperm donor	Sperm donor is open to contact at age 18.	Anonymous donors chosen for specific characteristics	Hands on touch @ belly. Visualizations & meditations for "welcoming"	Not applicable	Mother talked to babies often saying, "Mommy's right here." Much visualization of family.	Anticipated c-section, no screen & doula / med. staff singing @ mother's request	IP is the birth mother

Appendix B Table 2 Perinatal Information

New Fashioned Families

Child	Breast feeding	Touch in the first hours after birthing	Surrogate/Baby "goodbye"	Current frequency of contact between IPs, baby, & surro.	Child's health	Surrogate compensation	MIBS results
Esme	3-4 wks.	Surro & bio. Father held baby @ birth. IM arrived next day and held.	Surro. felt she was "brining in" not "giving up" a child. Surro. is like a godmother figure.	Frequent & surro. has a special name. Half sibs seen regularly as well.	Excellent & very happy	Personal gratification & for love of IM	No disruption
Elaine	10 days & pumped milk from surro. For 10 mo.	Surro. & IPs all held baby together in stage 3 labor and in the hours after birth.	Surro. cut umbilicus after pulsing ceased as symbolic separation & sang <i>Happy Birthdays</i> .	Weekly by phone/web & sibling planning is in process. Surro attended baby's first birthday party.	Excellent & very happy	Financial & personal gratification	No disruption
Penny	No	IF cut umbilicus & IM held baby after routine cleaning, weighing, etc.	Surro. Dressed baby, placed in car seat, kissed "g'bye," saying "see you soon!"	Weekly lunch in pregnancy & phone/web contact frequently.	Excellent & very happy	Financial & personal gratification	No disruption
Sasha/Fred	8 wks.	Holding as soon as possible following c-section birth.	Not applicable	Not applicable	Excellent & very happy. Sarah had some delays that have been successfully addressed.	Not applicable	No disruption

Bonding Results

All families took the Maternal-Infant Bonding Survey. In some cases, a surrogate and intended parent from one family unit each took the survey. Dr. Antonio Madrid reviewed the surveys and found no bonding disruptions.

While this pilot study used a small sample, the bonding results were extremely encouraging. In every family scenario, pre-pregnancy consciousness and/or conscious prenatal communication with the fetus took place. One mother visualized her family and baby during implantation while practicing hands on the belly meditations toward a healthy pregnancy and family. One surrogate arrived for implantation procedures having consciously placed henna tattoos of fertility and protection symbols on her body. Intended parents attended prenatal checkups and ultra-sound appointments, and spoke to the baby through the belly and/or touched the belly to make contact with the baby. One set of intended parents recorded themselves telling favorite childhood stories which the surrogate played to the fetus, through a special device, every other day from 30 weeks on. Another intended mother, who lived nearby, had lunch every week with the surrogate.

The babies of these intended parents recognized their voices after birth, and turned toward those parents alertly. Many of the surrogates communicated to the baby about how many people would be there to love him/her and that the intended parents were so happy and looking forward to seeing him/her soon. In two cases, the intended parents were part of the birthing process. One intended parent was in the water tub with the surrogate and when the baby emerged the six hands of the surrogate and the two intended parents all held the baby while all in the room sang the *Happy Birthday* song. This surrogate also cut the umbilical cord as a symbolic act of separation. She nursed the baby, roomed in with the IPs and then spent ten days near the baby before the IPs and baby flew home. This surrogate pumped and shipped breast-milk for ten months following the birth. She attended the baby's first birthday, and the parents sent her a Mother's Day card. They are planning a sibling using the same surrogate and are in touch with her weekly.

Another surrogate had the IPs at the birth, and had the IM room in at the hospital for 48 hours following the birth. The surrogate dressed the baby, put her in the car seat, and kissed her good-bye," saying, "see you soon," as a symbolic act of separation. This surrogate is in weekly contact with the family as well, having lunch with the IM and baby often and talking on the phone.

The third surrogate, who was friends with the IPs for years before conceiving a child for them currently lives a few blocks away from the

family. The surrogate mother and father's own children, who are biological half siblings, all spend time with what has become an extended family. The mother who gave birth via caesarian section requested that the surgeons and support staff sing *Oh Susanna* as a welcoming song to the babies during the procedure. They did so with willingness and glee.

In regard to egg and sperm donors, where relevant, the children have the opportunity to meet at least one of the donors at the age of 18 years.

The families in this study have made great efforts to bond with the children. Where the IPs and surrogates did not know each other prior to planning a family, they have become friends and remain friends. The family members of the surrogates are considered extended family in all relevant cases. This gives a new and encouraging view on the old adage; *it takes a village to raise a child*.

Discussion

Birth and death are closely related as opposite ends of the spectrum of life. In death there are many provisions for the leaving life. Hospice care has become increasingly utilized so that the dying can spend their last days away from the cold medical environment of the hospital and instead experience comfort, peace, and dignity, surrounded by caring family members at home. Hospice care often includes volunteers such as (death) doulas, spiritual/pastoral counselors, body workers, social workers, and therapists. The spiritual practice of Last Rites is offered to the dying to help ease their leaving and make peace with the time spent in the life they lived.

In birth we often have a highly medicalized entry into the world wrought with bright lights, cold instruments, technological equipment, and heavy drugs that can interfere with the natural hormones of childbirth and bonding. There are doulas for childbirth to provide continuous support to the mother, and a few hospitals and birthing centers have created special birthing rooms that are more home-like to soften the experience. The bulk of births in the Western world, however, involve medical interventions (that are often not necessary) as well as seldom warranted separation of the baby and parents in the crucial first hour after birth. In Western culture there is nothing equivalent to Last Rites that could be "First Rites."

In the case of babies created using ART or surrogacy, a conscious, highly-medicalized conception and implantation could perhaps benefit from a true acknowledgment of calling life into being via a "First Rites" practice. Such a practice could gather the collective consciousness of those involved in calling the child into being thus creating a bonding consciousness for the adults involved in conception, gestation, and raising

of the child. To do so would offer the same dignity and respect that we now offer the dying, thus completing the cycle of life.

Bonding in utero may begin with all parties related to the birth having more conscious awareness. Bonding disruptions could perhaps be avoided in this way. The families in this pilot study may or may not be exceptional in their efforts to bond. The immense desire for family, and the planning involved, may in fact influence bonding positively. Further study is needed with regard to new fashioned families. It would also be useful and important to interview egg and sperm donors regarding their consciousness and attitudes toward the conception of children bearing their genetic stamp. Further investigation could also include a review of what consciousness and bonding practices, if any, are being addressed in fertility centers.

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