

Foundations of Sex, Love and Relationships: From Conception to Birth*

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Publication info: Journal of Prenatal & Perinatal Psychology & Health 14. 1/2 (Fall 1999): 45-64.

[ProQuest document link](#)

Abstract: None available.

Full Text: Headnote ABSTRACT: The nine-month period from conception to birth, previously hidden and mysterious, is increasingly illuminated by the technology of science. Signs of intelligent behavior early in gestation cast new light on traditional ideas about the brain, learning, memory, self, and the primal origins of relationships. In the womb, relationships are everything; mother and child are progressively linked by physical senses, the aura of emotion, and their mutual perceptions of outside events. Their relationship is carried forward to birth, when babies learn much more about people and life. Machine age birth with its painful routines, intrusive manipulation, chemical agents, and nurseries teaches powerful lessons which can have lasting impact. The faculty of unconscious memory, increasingly breached and probed in psychotherapy, is particularly revealing of the primal foundations of sex, love, and relationships. INTRODUCTION The foundations of sex, love, and relationships are under construction before birth, a period once veiled in darkness but now accessible to science through many windows of observation. Discoveries made in the last twenty years have given us a new encyclopedia of knowledge about the unborn and newborn; most of our previous beliefs about them have been proven false.1-3 Intrauterine photography has taken us down the Fallopian tube to watch with amazement the union of sperm and egg.4 With real time ultrasound we can eavesdrop on the fetus at any time and see what is going on. The science of embryology has charted the development of all parts of the body by the week and the day; you can see it all displayed in a full color atlas.5 Extensive studies of the sense of touch, equilibrium, taste, hearing, smell, and sight tell us when senses are present and working. As neuroscience leaps forward, much of what we thought we knew about the infant brain turns out to be misleading. An array of psychological studies of learning, perception, and memory both before and after birth make it appropriate to use the term cognitive newborn for the first time.6 As a psychologist (and grandparent) I am particularly interested in the foundations of mind and personality and what parents and doctors are doing to help or hinder development. In my book Babies Remember Birth, I focused public attention on the validity of birth memories and the unexpected maturity of thought they contain.7 I do not repeat those arguments here. According modern research, the newborn is a competent learner, engaging personality, and gifted communicator. These surprising abilities do not spring suddenly to life like a Jack-in-the-Box at birth. They begin in the womb. Here we can look for the beginnings of sex, love, and relationships, a prime interest in prenatal and perinatal psychology, as it is in sex therapy, sex education, and marriage counseling. SIGNS OF INTELLIGENCE BEFORE BIRTH My first task is to note briefly some of the evidence for intelligent behavior before birth, intelligence being the kind of mental self-management used in adapting to conditions, selecting among conditions, and purposefully shaping new conditions.8 Being able to benefit from experience is another important feature of intelligence, and implies learning and memory. I begin here because without this it is difficult to appreciate how experiences in the womb can matter. Intelligence before birth was not supposed to be possible. Old views of the brain held that the first parts of the brain to develop were primitive and not capable of complex activity; they were thought to depend on higher structures which would not be developed until after birth. Learning and memory before birth were not anticipated, hence experiences in the womb and at birth could not be educational. Without a properly functioning brain, there could be no real person. If there were no person, there would be no immediate need for parenting, no psyche, no need for a prenatal psychology or even a birth psychology. Pregnancy was a time before parenthood, one that did not count because no one was in residence. Communication and relationship with a baby in the womb was, from a scientific point of view, impossible. All of these prior assumptions have

been proven false. At 7.5 weeks the human embryo will turn away from a hair stroke on the cheek. From then until 17 weeks, sensitivity spreads to include most parts of the body.⁹ Once dismissed as a series of "reflexes," I believe this development is better described as a steady progression of sensitivity. Endorphins circulating in the seventh week from conception are an early sign that an intelligence network is functioning.¹⁰ Developing more rapidly than the brain are the endocrine system and the immune system, which we have now learned are vital parts of a fluid communication system. Together with the nervous system, they comprise an interactive, multidirectional intelligence network.¹¹ The memory of the immune system, one of many types of memory we possess, seems to begin identifying and recording foreign antigens without waiting for further brain developments. Some experts believe the immune system may deal with an average of seventy viruses at a time, and will eventually accumulate information to deal with a million different antigens.¹² Between 10 and 12 weeks from conception, rather suddenly, the fetus begins a vigorous program of physical exercise, rolling from side to side, extending and flexing the back and neck, turning of the head on the neck, waving arms, kicking legs, and flexing feet.¹³ This movement continues without much change through gestation. Seen via sonography, it is graceful and spontaneous, a coordination which reveals some form of intelligent direction. At 14 weeks, when all structures of taste are in place the fetus begins tasting and swallowing. Taste preferences appear. A drop of lipidol, a bitter substance, in the amniotic fluid brings swallowing to a halt while a drop of saccharine will double the swallowing. Nicotine and alcohol will slow it. With the structures for hearing in place by the fifth month it appears the fetus is learning its mother's voice characteristics. Working with acoustic spectrography applied to the infant cry for the first time, John Lind and Henry Truby^{14,15} discovered that the first cry of a fivemonth-old aborted fetus could be matched with the voice of its mother. This suggests that we begin learning/remembering our "mother tongue" in the womb. After birth, babies know their mother's voice from other voices and prefer to hear them.^{16,17} While a mother's voice is usually favorite, the voice of a chronically shrill and angry mother may become obnoxious and affect the baby's desire to listen and communicate with her.¹⁸ Possible dire consequences for future relationships may start here. Babies in the womb show other sound preferences as they react differentially to music. Beethoven, Brahms, and rock are too disturbing, as one woman would testify who came home from a rock concert with a broken rib. Vivaldi and Mozart were preferred (surely a sign of intelligence). Babies who hear a children's story daily for six weeks before birth distinguish it and prefer it to a new one after birth.¹⁹ Listening with an 'ear for music' in the womb is illustrated by a woman in Wisconsin who was adopted a few days after birth. In the third grade of school, when given the opportunity to play a musical instrument, she chose the saxophone although she knew nothing about it. Later she discovered that her birth mother had played a saxophone all during that pregnancy. Intelligence can be seen in the earliest recorded fetal cries at 21 weeks. These sounds from a fetus being aborted seem entirely appropriate. Other equally appropriate cries have been heard from inside the womb in reaction to obstetrical procedures shortly before birth. This startling phenomenon, vagitus uterinus (squalling in the womb), documented in over one hundred reports in the medical literature also appears intelligent.²⁰ The prenatal cries were well justified, urgent communications, since a portion of them died. Likewise, the newborn cries, studied acoustically for a quarter century, have been found to be precisely informative.²¹ Babies have been seen via sonogram reacting to the intrusion of the needle into the womb for amniocentesis. What prompts them to retreat, and how do they do this with eyes closed? Some have seen the fetus reach out as if to grasp the needle. Following amniocentesis, many fetuses lose heartbeat variability and become motionless-an ominous reaction. Perhaps this too is an intelligent reaction to invasion of a sacred space. To illustrate the ability of prenates to respond to the communications of parents, Professor Mac Freeman of Queens University, Ontario, writes of a father who greeted his unborn baby every night after work by placing his face against his wife's abdomen saying "Hoo Hoo!"²² At 25 weeks, while sending one of his nightly messages, the father felt pressure on his cheek and saw a bulge where the prelate was pushing up with a foot. When he pressed his face on the other side and repeated the greeting, a bulge came up also on that side! From that night on; for 15 weeks before birth, father

and child played "tag." That any father can have this experience is evidence of prenatal learning and memory, communication ability, and readiness for relationships. SEX AND RELATIONSHIPS IN THE WOMB In the womb, relationships are everything. The placenta, once considered a "barrier" separating and protecting the growing baby from the cruel world is now understood to be an organ of transfer, meaning that most of what happens in the mother is transported to the baby. Mother and child are connected, not isolated, sharing every meal, every hiccup, and every cigarette. If a mother goes to exercise class and jumps up and down, baby will be jumping up and down too. The continuous social intercourse of mother and child is intimate and inescapable.

Teratogens We understand now that when mother drinks, baby drinks. Alcohol drinking around the time of conception may have tragic consequences in the form of craniofacial abnormalities.²³ Regular consumption may result in Fetal Alcohol Syndrome, a baby with a shrunken body and brain. In ancient Greece, the philosopher Plato warned mothers that this would happen; he was correct.²⁴ Fathers can contribute abnormalities to their children via sperm after being exposed to environmental toxins like lead, anesthetics, germicidal soap, cigarettes, and caffeine. The result, depending on dose and timing, can be spontaneous abortions, stillbirth, congenital deformities, premature birth, and low birth weight predisposing to further health problems. Toxic effects are more potent, of course, if both mother and father ingest them.²⁵ Mothers in modern society are exposed to a long list of household and environmental teratogens. Even common drugs used safely by mothers themselves may be embryo-toxic and can result in serious problems for offspring, for example deafness (from streptomycin), cleft palate (penicillin), limb deficits (contraceptives), and heart defects (tranquilizers, amphetamines) and other handicaps.²⁶ We are dealing here with unintended morbidity in parent-child relationships before birth which can expand into life-long relationship problems affecting sex, love, and marriage.

Nutrition Experts used to tell mothers that malnutrition spares the brain, giving them an entirely false feeling of security about their responsibility before birth. The truth is that malnutrition of the mother will effect every part of the infant's brain (neurons, synapses, myelin, and neurotransmitters) resulting in brains of lower weight, length, and size.²⁷ Feeding the child in the womb is a very early obligation. One of the first ways to love a child is to eat enough to give him or her a good brain. Overnutrition in pregnancy, the opposite problem from undereating, is a risk factor for development of obesity, diabetes, and atherosclerosis.²⁸ Investigators explain that excessive insulin and glucose levels during a critical period of brain construction can irreversibly alter the tolerance ranges of hypothalamic control centers for glucose metabolism. Careless overeating by pregnant mothers therefore may mean a future of suffering.

Neurobiological Processes Thanks to progress in neurobiology we are beginning to understand the mechanisms by which behavior in pregnancy can create long-term problems of sex, love, and relationships. During prenatal life hormones and neurotransmitters act as "organizers" of the brain and control its participation in the endocrine and immune systems. Abnormal levels of these systemic messengers in crucial stages of brain differentiation can lead to permanent physiological and psychological dysfunctions. Fundamental processes of life such as reproduction, metabolism, and information processing, are controlled by neuro-endocrine feedback systems. For example, as Dorner²⁸ points out, sexual differentiation of the brain takes place in at least five steps, any one of which may be disturbed, affecting sexual preferences, sex drive, and gender identity. Psychosocial influences before birth may also affect the levels of systemic neurotransmitters, and thus become possible etiogenetic factors in the development of sexual deviations. Studies of men born in Germany during World War II showed that significantly more homosexuals were born during the war and early post-war period than in the years before and after.²⁸⁻³⁰ In wartime, in addition to bombings and battles, severe stresses include hunger, rape, bereavement, separation from friends and family, and other deprivations and uncertainties. Things having a heavy impact on body chemistry can seriously affect the course of gestation. New evidence that maternal emotion is correlated with fetal activity comes from ultrasound.³¹ The child inside is constantly adjusting to the action of the mother. It is not strange then that parents report having to leave movies like *Platoon* and *Raiders of the Lost Ark* because the baby is kicking wildly. The child hears the sound by both bone and water conduction and 'swims' in the mother's

emotions. Such traumas, induced by Hollywood or in real life, include serious accidents, emergency surgery, kidnappings, natural disasters, spousal abuse, burns and the like. We should not be surprised to have them show up in later years as phobia, anxiety, depression, compulsiveness, or emotional hiding and hardening.

EFFECTS OF BEING UNWANTED Thanks to extraordinary longitudinal studies of children in Sweden and Poland, we are able to judge the pervasive consequences of flawed parent-child relationships before birth.³² Several groups of children unwanted at conception, unwanted during gestation, and delivered after refusal of applications for abortion were studied for 35 years. They were found to be at greater risk than control subjects for adverse psychosocial problems, received more psychiatric attention, were more often delinquent, and did more poorly in school.³³ Even more disturbing were findings from a cohort of children in Prague, born in the early 1960's. This ambitious study employed a sophisticated double-blind method, used matched-pair controls, extensive psychological assessments, and public records. By age nine, the children born to mothers twice refused for abortion ended up receiving more medical care for acute and long-term illnesses, were rated lower in academic achievement, and were even rejected as friends more often by schoolmates. These unwanted children, born into a relationship of maternal ambivalence, were more deviant, received less empathy and attention to their communications, had less warm interchanges, and were psychologically deprived.³⁴ When measured at age 14, their school performance had deteriorated, many opting not to continue to secondary school. Teachers rated them more hyperactive and less sociable. They felt more rejected by their mothers than did the matched-pairs. Their relationships with parents also worsened with time.³⁵ By age 23 unwanted children showed a greater proneness to social problems, criminal activity, and had triple the amount of serious repeated offenses requiring custodial sentences. When questioned about their happiness and lifestyle they reported far more dissatisfaction, unhappiness, problems, and worries than the controls. They mentioned poor relationships with their parents and knew that their parents were dissatisfied with them. In addition they reported repeated disappointments with love relationships and agreed with the statement that "love brings more trouble than pleasure." Unwanted children, themselves breastfed for a significantly shorter time than controls, gave the opinion that a child should be breastfed for no longer than two months at most. Unwanted children drank more black coffee, smoked more heavily, and drank larger quantities of beer than their matched pairs. More of them were in psychiatric treatment. They coped less well than their counterparts with even mild stress. Unwanted children who grew up and married reported their marriages less satisfying, their pregnancies less often welcome, and required more time to develop a close relationship with the developing fetus they were carrying in their wombs. When asked how long they planned to stay at home with their child, most of these mothers said until the end of paid maternity leave (two years) while their matchedpair mothers said they expected to stay home until the child went to school. We must take seriously this trail of sorrow beginning with repeated rejections in the critical days before birth. These children did worse in virtually every way than their matched pairs born in the same hospital at the same time to similar parents who welcomed pregnancy.

Effects of Failed Abortion Attempts As a hypnotherapist I can testify to the kind of psychological damage which can be done in cases of attempted, but failed, abortion. Memories retrieved from this period reveal how relationships with mothers and fathers were altered, life issues and attitudes were formed, and fears were planted. Verification of such prenatal memories has come in unexpected ways. Australian psychiatrist, Graham Farrant, discovered by repeated priming that his mother had attempted to abort him and he remembered exactly how she did it. He called his 79-year-old mother and asked her about it. After she denied it, he told her she had taken a number of pills and got into a hot bath. Mother burst into tears and said he could not possibly know this because she had never told anybody.³⁶ Unconscious memories of attempted abortion were discovered in a series of cases by psychologist Andrew Feldmar of British Columbia.³⁷ Eventually, four youths came into treatment for repeated suicide attempts. Each had a record of more than five attempts, almost annually, and at the same time each year. Feldmar discovered that these were actually anniversary dates when their mothers had attempted to abort them, although they had no conscious knowledge of the attempt at all. He found it out talking to the mothers.

After getting mothers and children together things changed. In later years these young people said they thought about suicide when the anniversaries came around but never wanted to do it again. An unlikely breakthrough to unconscious memory is revealed by my client, Ida, recalling an abortion attempt in hypnosis. I have heard many such reports. If they are true memories, they suggest a profound difference between mind and brain at a very early period in gestation. Here, thought is innate and relationships are forming while the body itself is forming. Ida: "It's just too sad. I was hardly formed and my mom is using some kind of remedy to wash me away. It just feels hot, real hot. I don't know how I know, but she is trying to get me out of there. I'm nothing, just a little blob. I don't know how I know but I know. My Aunt seems to be giving my mom direction. I can hear her voice. She (mother) is not supposed to get pregnant. She doesn't know me. It didn't work, either. I didn't feel safe. It had . . . (That's crazy; she tells herself, you can't smell anything when you are in the uterus!) a strong, harsh smell, an extremely strong disinfectant smell, like ammonia, strong, a vile, strong smell. I see where I was too. I was really nothing. I was really up there, just small, a teeny little thing. I knew nobody really wanted me then ... My mom didn't want me." When relationships are good, life can be good in the womb. My client, Linda, having a womb memory, describes her mother's timid and awkward but loving attempts at communication with her. When I asked if her mother talked to her she answered in this way: "It seems like sometimes she feels like it but she doesn't, but I can tell she wants to. Sometimes she talks to herself but she is really talking to me. She feels silly talking to me, so she is talking to herself, but she is really talking to me." Sex Before Birth Obstetricians have discovered penile erections in a series of sonograms, opening up surprising possibilities of sex before birth. Scrotum and penis are complete in the fourth month after conception. Erections were first found in seven cases around the 26th week of gestation, indicating that the associated nerve pathways could be complete and operational by that time.³⁸ More recently, ultrasound technicians report seeing these at 16 weeks. Typically, the prenatals were also sucking their thumbs at the time of the erections. Erections are possibly indicative of sexual pleasure. If males are having sexual feelings, females may also be having them. Other signs of sex before birth come from experiments measuring fetal heart rates while parents are having sexual intercourse between week 28 and 38 of pregnancy.^{39,40} Three volunteer obstetricians and their spouses obtained thirteen sets of traces showing fetal movement, uterine activity, and heart rate changes. Fetal movement and uterine activity were described as increased or excessive. In most cases wild fluctuations of the heart rate followed male and female orgasms, including tachycardia, bradycardia, accelerations greater than 30 BPM, decelerations, and loss of variability. One couple feared the effects of deceleration (fetal distress and/or hypoxia) on the fetus and decided to abstain from intercourse after this finding. We must consider what this experience would be like for prenatals. Dreaming Babies dream before birth as we learn from testing those born prematurely. Dreaming is important as an expression of self and a way to process inner experience. We know from our own dreams how easily sexual themes arise and how relationships are the very stuff of dreams. Their EEGs and other vital signs reveal that premature babies are the most frequent dreamers:-virtually 100% of sleep is REM at 30 weeks, decreasing to about 50% at 40 weeks (and steadily decreasing throughout the life span.⁴¹ What could they be dreaming about? Possibly any of their experiences to date. While dreaming, babies look and act like the rest of us, including similar facial expressions, body movements, heart activity, changes in respiration etc. Faces are full of emotion; observers report expressions of perplexity, disdain, skepticism, and mild amusement. Bad dreams are probably signaled by writhing of the torso, limbs and digits, grimaces, whimpers, twitches of the face, extremities, and shifting of body and limbs. In dream we can see the first smiles. What are they smiling about? Probably about something good. We used to deny the meaning of these first smiles by calling them 'gas' or 'muscle spasms,' but smiles are precious expressions of feeling. They are significant, positive communications to treasure. A mother reported to me that her neonate actually laughed out loud in dreams. Laughs are even better than smiles. Both laughs and smiles are cognitive: thoughts accompanied by joy. We should be cultivating birth smiles and laughter, perhaps using them to rate birth practitioners and birth facilities. But we are not. LOVE LESSONS AT BIRTH Unfortunately, the main thing to be heard at birth are wails of protest, which

have the opposite meaning from smiles. In the past, experts denied the meaning of these cries, calling them 'random sound,' but this was a serious miscalculation. Cries are exquisitely communicative, if we listen to them carefully. Birth cries are an urgent cry for help but they are seldom answered. My client Emily remembered it this way: "It's so cold in my eyes, and my head still hurts. They're laughing because I'm crying ... I don't think I like these people." Deborah tells us how hard it was to communicate with adults: "I tried to tell everybody but they wouldn't listen. I was trying to talk but they didn't understand me. I was crying, trying to talk, but I guess it was just crying to them. They weren't listening to me." Babies learn about people from their experiences with people. Unlike adults, infants appear to be empathic and discriminating about the cry sounds they hear. They are unmoved by computer-simulated cries, by animal cries, white noise, and even the cries of older children, but they join heartily in the cries of babies their own age, suggesting it is a language they share, although they have not heard it before. This empathic sensitivity to other newborns is a precious quality.⁴² Another form of empathic dialogue displayed by newborns is imitation. Infants can read faces with precision and respond instantly in kind. Seeing expressions of happiness, sadness, or surprise on adult faces, newborn infants can return the same expression.⁴³ This amazing form of communication is intimate, social, and powerfully bonding; like cry discrimination, imitation is accomplished without practice or experience. Babies project cries for pain, anger, hunger and boredom. When mothers learn this language quickly, crying is held to a minimum. Delayed responses, however, mean much longer periods of inconsolability. Babies that cry themselves into exhaustion may be learning lessons which will prepare them for sex, love, and marriage. Intimacy After Birth Intimacy between newborns and mothers is shaped by experience in the womb. They learn her voice by continually orienting to it. In a matter of minutes after birth, they become familiar with mother's face and can soon pick out her face in a series of large photos. Weekold babies nursing at the breast become upset if mothers wear a mask and remain silent for one feeding. They spit up, take less milk, look about anxiously, and sleep differently after this unusual maternal behavior. Also in the first week, babies learn to distinguish their mother's breast pad from another mother's pad.⁴⁴ After two weeks of breastfeeding, they have learned to discriminate their mother's underarm odor from that of other females.⁴⁵ Neonates are disturbed watching motion pictures of their mothers talking but with a sound track of some other woman's voice instead. It is also disturbing if their mother's voice is associated with another woman's face. They have a sense of what belongs together. Fathers Babies respond to their father's voice, although it is not as familiar and popular as mother's. Memories retrieved in hypnosis indicate that newborns take careful note of father's attitude and behavior. For example, Annette knew from her father's expression looking through the nursery window that her sex was a disappointment to him. They had been expecting a boy named Gordon. Baby Helen sensed she was the "wrong" sex because her father needed more men on the ranch. She would try for years to make up for this by being a tomboy who could eat as much and work as hard as a man. Siblings Siblings can also take part in the shaping of personality before and after birth. Faye recalled a scene with her sisters before she was born in which they said they didn't want her and would try to get rid of her. After birth, the scene was repeated: 'Now I'm in a crib and my sisters are leaning over, telling me that they don't want me and I have no right to be there, and that I messed up their whole lives!' They did in fact carry out a series of hostile acts against her and she carried the fear into adulthood that she was "at war" and needed to protect herself. Displaying astute consciousness of the character of people around her at birth, my client Maxine, born at home, remembered this: "The nurse was there, and she liked me. And my daddy liked me, I could tell. My brother even liked that I had come. He came in to look at me and brought some other children to see me. Dr T. was nice; I like him too. But I wasn't accepted by my mother. When I was born my mother said I was a boy! . . . She said to me, "Why are you here? I don't know how to take care of you . . . You're no good, and I just don't understand.'" Mother-Child Problems Relationships can turn sour in a hurry. One mother said to her doctor in the delivery room, "Why didn't you just wrap the umbilical cord around her neck and strangle her!" Not surprisingly, this daughter said she had "hated her mother from Day One." Some relationships deteriorate before birth. Describing pregnancy with her mother, my client, Sandra, said she felt like

a shipwrecked sailor who wasn't sure if she could make it. Being taken to her mother after delivery was not welcome. "Then they took me to my mother. Horrible! I didn't want to go back to her. I wanted the nice nurse to keep me. I didn't want my mommy's bony, nervous fingers on me!" Baby Emily shrewdly observed her parents behavior in the hospital room after birth. Of her father she said, "Then he comes over and looks at me, but he doesn't pick me up. He just pokes me with his finger. He doesn't know I'm a person. I am a thing called "Baby." He's saying, "That's all the babies; this one was hard enough." They give me a headache . . ." Machine-Age Birth Trauma Machine age birth, dominant in the last half of the 20th century, has favored high-tech over natural processes, replaced feminine with masculine approaches, inserted medical priorities where family traditions once stood, and has persistently violated the sensibilities of infants. By ignoring the human needs of fathers, mothers, and infants, high-tech birth has generated its own pathology. Most babies are born into frigid rooms, bombarded with inappropriate light and sound, injected with needles, lanced for blood, and stretched out to measure; they are spun around in the hands of strangers, roughly wiped, while their eyes sting with a germ killer. In this way the sense of touch-our first sense-is disregarded again and again. If imprinted in consciousness, these assaults can hardly be expected to contribute to feelings of trust, bonds of love, or to family integrity. Some costs of this new way of birth can already be calculated. Sexual Harmonics For mothers, the sexual harmonics of being pregnant and giving birth have been all but obliterated in hospital birth. As Britain's rebel psychiatrist R. D. Laing puts it, childbirth in an obstetrical unit "no more resembles birth than artificial insemination resembles sexual intercourse or a tube feed resembles eating."⁴⁶ The vision of passionate, even orgasmic birth has been nearly eclipsed. It is kept alive by a tiny subculture of women who give birth with abandon, usually at home where they are free to do things their own way, or in a birth center where they are not manipulated and scheduled. Drugs and Other Trauma The medicalization of birth in the last half century has involved babies and mothers in endless experiments with drugs, combinations of drugs, and new and improved drugs. Effects on mother and child are not always benign. The required intravenous tube in the mother's arm provides for quick and easy administration of drugs, as many as seven for vaginal delivery, perhaps fifteen for cesarean section-a pharmaceutical feast. Most of what is given to the mother reaches the baby, first by way of the placenta and later via breast milk, and in adult doses. These agents are toxic and may be hazardous to a baby's health. A review of fifty-nine studies on the behavioral effects of obstetrical drugs on infants indicates possible damage to the central nervous system; impaired reflex, sensory, and motor responses, information processing, and reduced ability to quiet and cope with stress.⁴⁷ Observers report that drugs interfere with feeding, sucking, and rooting, disrupt social behavior, create abnormal brain wave patterns, lower the scores on scales of infant development, and increase irritability. Most disturbing is the prospect of damage well beyond the newborn period. If delicate brain mechanisms and developmental processes around the tune of birth are damaged, the consequences for quality of life and relationships in the future may be profound. Data further supporting this concern comes from large scale statistical studies of babies born in six hospitals of Stockholm from 1940-1960.⁴⁸ This group found that multiple drug administration to mothers at birth was associated with drug addiction in their grown-up children. Comparing siblings, it was discovered that children were three times more likely to become addicts if their mother had been given drugs at birth. Other studies have found a correlation between types of trauma at birth and adolescent suicide.⁴⁹ The suicides were differentiated from controls by (1) respiratory distress during birth, (2) no antenatal care for the first half of pregnancy (neglect), and (3) chronic disease of the mother. These risk factors are both obstetrical and parental. Hospital Nurseries Healthy babies born in most hospitals today are routinely taken to nurseries where they experience exile from the person they most need and want, mother. Thus, by hospital policy, a family is fractured at its own birth. Psychological problems created by the nursery for its helpless occupants include loneliness, confusion, fear, resentment, frustration, and anger. Some babies will have their first bout with depression here. For others, the nursery will be a breeding place for mistrust. Babies born seriously ill or dangerously premature will experience the ultimate impact of technology in a super nursery where they will live

in a man-made womb, kept alive by multiple tubes, catheters, and needles, under unceasing fluorescent light. Here pain is a way of life. The immense suffering, damage, and cost of this new kind of beginning are staggering. Although some graduates of neonatal intensive care appear to be normal, both mortality and morbidity are high, prompting some experts to refer to the NICU as "a mixed blessing."⁵⁰⁻⁶¹ Cognitive problems are common following neonatal intensive care including mental retardation, speech and language disorders, behavior problems, vision or hearing problems, and various neuromotor dysfunctions. In one group of graduates who had reached the age of twelve, one quarter were suffering from learning disabilities.⁵²⁻⁵³ Emotional problems are equally prominent. In one assessment of graduates 3-8 years old, 49% showed objective signs of emotional dysfunction.⁵⁴

Painful Arrivals We know from the conscious memories of children two to three years of age that children are born with superb critical faculties and in the first minutes of life have no trouble engaging in social criticism of modern birth practices.⁷⁻⁵⁵ ¹ have found similar evidence by comparing the birth memories of ten mother and child pairs in hypnosis.⁵⁶ Judging from these reports, modern babies are often traumatized, trivialized, and depersonalized. Birth is made painful for babies by obstetrical routines, although the pain itself is usually denied by those in charge.⁵⁷ Once born it will be the fate of most babies to be cradled in boxes rather than arms; attended to in a group rather than personally, and this is called "the best of care." Surely this form of birth is a setback for love. Denial of infant pain is nowhere more dramatically revealed than in the ritual practice of circumcision, a cultic rite adopted by modern obstetrics. While the practice is not common in Eastern countries, circumcision of male newborns has been widely practiced in the West. In the United States the rate is currently averaging 60%. Although no longer justifiable for medical reasons, helpless babies are nevertheless strapped to circ boards, their penises erect, and protesting loudly while their foreskin is peeled, clamped, and cut. Parents make a large contribution to the survival of this barbaric practice by demanding it for their sons. Doctors and parents alike are naive in thinking this experience could be benign. Trauma on this scale does not pass through the infant mind without leaving psychological and physical scars. A psychotherapist told me recently she had worked with a "couple of hundred" men who, in hypnosis, could vividly recall their own circumcisions. The systematic and needless torture of baby boys survives from a bygone era when babies were thought (erroneously) to be without senses, without emotions, and without memory. Ironically, men have been the chief circumcisers of the world.

PICKING UP THE PIECES

Psychotherapists of many types (primal therapists, hypnotherapists, psychoanalysts) have been testifying for many years that in all too many cases the traumas of birth create a template through which emotions and relationships are extruded for years to come.⁵⁸⁻⁶² Typical emotional and physical problems related to birth trauma include addiction, fear, guilt, distrust in relationships, depression, headaches, problems with breathing, eating, hate, and self-esteem. All these difficulties may be traceable to a common root: frustration of the primal and indispensable need for attachment and love. Psychiatrist Rene Spitz⁶³ was one of the first to warn that babies placed in foundling homes were perishing in a year's time because they were deprived of mothering. This concern for motherly care was taken up by other psychoanalysts, perhaps most notably John Bowlby^{64,65} who has published a series of works on attachment, separation and anxiety. Bowlby came to believe that violence in the family was a disorder of attachment and caregiving.⁶⁶ Similarly, Magid and McKelvey⁶⁷ believe that the rash of new cases of antisocial, borderline, and multiple personality disorders are appearing in those who started life unattached, with significant gaps in relationships during early development. Called "children without a conscience," they grow up with no sense of guilt and cannot follow rules or form lasting relationships. According to these experts, we are now facing a "bonding" crisis because so many mothers are working, child care is hard to find, children are having children, abuse and neglect of children is widespread, foster care is short-term, and adopted children come with psychic wounds. They fear a bitter harvest from babies who had to start life in unremitting pain in a neonatal intensive care unit, babies who did not know who their parents were going to be, or babies born into a family hostile toward them. Recent breakthroughs in the neurobiology of attachment and separation have both confirmed and added new urgency to these psychological theories. In

infants who are early separated from their mothers or whose desperate cries for help go unanswered, changes take place in hypothalamic serotonin, adrenal gland catecholamine-synthesizing enzymes, plasma cortisol, heart rate, body temperature, and sleep. Van der Kolk writes that "these changes are not transient or mild, and their persistence suggests that long-term neurobiological alterations underlie the psychological effects of early separation."⁶⁸ The typical consequence of repeated failure of parental nurturance is a bi-phasic protest/despair reaction leading biochemically to common disturbances such as hyperactivity or underactivity, panic attacks or cyclical depression in adulthood. This will have a pervasive effect on sex, love, relationships, happiness, and marriage.

CONCLUSION As surely as love-making leads to baby-making, the feelings, interests, and relationships which predominate in the womb become the foundations for living a healthy, happy life. In the womb, we all have our first lesson in the first facts of life and love. Although these are not the last or only facts we learn, they do seem to have extra valence because they are primal. A mother's womb is our first environment. It is here that quality of life is established. The event of birth, in its context of vulnerability, intimacy, and love, is a climactic imprint following nine months of programming and sensitization within. Childbirth can push us toward pathology or toward wholeness. The downside of machine-age parenting may already be confronting us in a harvest of addictions and afflictions: psychosis and neurosis, personality disorder, domestic violence, and sexual abuse. If we are to avoid personal miseries, personality disorders and social disasters, we must learn to treasure and support the quintessential journey from conception to birth. Next, we must assure that arrival rituals for fully sentient babies are truly appropriate to their human nature. Finally, to assure that the foundations for sex, love, and relationships are soundly made, the all-important bonds of parental love must ever be cultivated and protected, not shattered.

Footnote * This paper was originally presented to the Western Regional Meeting of the Society for the Scientific Study of Sex (1989), Marina del Rey, CA. It was published in the *International Journal of Prenatal and Perinatal Studies*, Volume 1(3), September 1989.

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Publication title: Journal of Prenatal&Perinatal Psychology&Health

Volume: 14

Issue: 1/2

Pages: 45-64

Number of pages: 20

Publication year: 1999

Publication date: Fall 1999

Year: 1999

Publisher: Association for Pre&Perinatal Psychology and Health

Place of publication: Forestville

Country of publication: United States

Journal subject: Medical Sciences--Obstetrics And Gynecology, Psychology, Birth Control

ISSN: 10978003

Source type: Scholarly Journals

Language of publication: English

Document type: General Information

ProQuest document ID: 198692388

Document URL: <http://search.proquest.com/docview/198692388?accountid=36557>

Copyright: Copyright Association for Pre&Perinatal Psychology and Health Fall 1999

Last updated: 2010-06-06

Database: ProQuest Public Health

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