

The Relevance of the Dread of Being Aborted to Models of Therapy and Models of the Mind, Part II: Mentation and Communication in the Unborn

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Full Text: Headnote ABSTRACT: This paper explores the question of mentation and communication in the unborn using data from neurology, pediatrics, obstetrics, biochemistry, embryology, animal research, ultrasound studies, infant development, studies of autism, linguistics, kinesics, patient reports, family system theory, and studies of primitive mental states. It also includes a discussion on the pertinence of polysema and semiosis, non-verbal knowing, time sense, and the ambient prenatal psychological family to an understanding of prenatal experience. Countertransference resistances to studying mentation and communication in the unborn are examined, particularly relative to the issue of considering a psychological component in prenatal trauma. A review of these many areas of study provides documentation of the fact that there is more mentation and communication in the unborn than is generally believed to be the case. This lends credence to the idea that the dread of being aborted has its genesis in an intrauterine trauma involving the threat of being aborted, which is registered, remembered, and transferentially acted out symbolically in post natal life until analysis connects the presenting symptomatology to the underlying dread of being aborted, as has been demonstrated in the two cases presented in part I of this paper. A hypothesis is advanced whereby a threat of being aborted could be communicated to and registered in the unborn. The combined data from both part I and part II suggest that new models of therapy and of the mind are needed that include a consideration of prenatal mentation and communication. INTRODUCTION I have described in part I of this paper (Sonne, 1995) how connecting the word abortion to feelings of dread that had been previously attached to other entities such as tunnels, bridges and various everyday interpersonal situations resulted in major changes in two men, George and Richard. Each experienced a marked diminution of presenting symptomatology, a change in thinking processes, an enrichment of language ability, and the development of a more solid sense of presence and self-assertiveness. The dread previously attached to other elements ultimately turned out to be a dread of being, and a wish to be, aborted themselves. As a defense against this dread and wish each had a wish to abort, or sanction the abortion of, others. Prior to resolution of their abortion complexes, George and Richard's mental lives, although mature in many ways, possessed qualities of formlessness, timelessness, sameness, fusion and equilibrium, similar to that seen in borderline conditions and psychoses. They were drifting, alive but not alive. Both men had regarded themselves as incurable. Their symptoms had proved to be intractable despite years of analysis with myself and other analysts, and there was a long delay before their feelings of dread were connected with the word abortion. The dramatic positive changes and the rapid disappearance of intractable symptoms in George and Richard when their abortion dynamics were explored raises many important theoretical questions about prenatal mentation and communication which will be addressed in this paper through examination of studies from multiple disciplines which are applicable to furthering our understanding of the biopsychosocial life of the unborn. I shall discuss various impediments, including countertransference resistances, that have interfered with expanding our knowledge of the prenatal period of development. A hypothesis will be advanced to explain how an intrauterinely experienced threat of being aborted could be communicated to the unborn, producing a physical and psychological traumatic insult which results, among other consequences, in the registration of a dread of being aborted, at that time unnamed as such. The study of prenatal experiences, which might be called the study of psychoembryology, presents scientists with a challenge equivalent to the physicist's study of outer space and the origin of the universe. Though difficult, requiring inference, speculation, and hints from multiple

disciplines, such a study, given great impetus by Liley (1972) in "The Foetus has a Personality," and Verny and Kelly (1981) in "The Secret Life of the Unborn Child," holds great promise for unifying much of biopsychosocial theory and bridging the mind-body dichotomy. Most studies of psychogenesis have given little consideration to the possibility that some psychological or psychosomatic illnesses may be transferential derivatives of traumatic intrauterine experiences. To study experiences before birth seems to many analysts to be stretching things too far, an almost unthinkable endeavor better left to biologists, biochemists and neurologists. One colleague with whom I discussed this issue told me that he was surprised that I was coming "out of the closet" with such primitive thinking, and that he was more interested in "real" people than in the unborn. Another told me that for him psychology begins at birth. Such a perspective consigns the unborn to a purely biological and reflex existence, which somehow magically becomes a psychological one after birth. Although there are dynamic resistances which could account for this non-curious attitude, a surface reason could be that there is an almost automatic assumption on the part of many of us that the prenatal brain is so immature that prenatal registration of experience cannot be considered to have even a primitive psychic component to it. That the adult brain processes data in a more sophisticated manner than the immature brain is not a reason to assume that the immature brain is not processing data at all, and has no psychic component to it. Rather it is reason to consider that the immature brain processes data in an unsophisticated, immature, and as yet little understood way.

THE BRAIN

Since the brain is generally considered to be the main organ that processes internal and external stimuli, I would like to begin my examination of the question of pre-natal mentation by reviewing some generally accepted ideas about brain function. The major part of this knowledge comes from studies of the adult brain, less from studies of the pre-natal brain. These studies are helping us to understand how the brain and psyche are intertwined. Over the last ten years neuroscientists, neuropsychologists and philosophers have increasingly attempted to correlate mental processes, including perception, memory, and states of consciousness, with brain development and function. Among these are Winson (1985) in "Brain and Psyche," Squire (1987) in "Memory and Brain," Shallice (1988) in "From Neuropsychology to Mental Structure," Edelman (1989) in "The Remembered Present," and Dennett (1991) in "Consciousness Explained." These researchers primarily focus on how increasingly complex mentation has come about through postnatal relational learning experiences which have influenced evolution in terms of Darwin's survival of the fittest. The sports that survive in the competition of life reproduce more complex offspring who gradually become predominant in the human population. I shall review some generally agreed upon concepts of brain functioning, and attempt to correlate them with mature and immature mental functioning, with particular emphasis on memory, affect, language, and logic. Knowledge in the fields of neurology, neuropsychology and molecular biology is rapidly increasing, but there is much that is as yet not completely understood. As far as memory transfers are concerned, the areas of the brain involved are the amygdala, the hippocampus, and the medial temporal region. The hedonic limbic system is related to pleasure. The right brain seems to be mostly concerned with affect and global spatiotemporal processes, and the left brain seems to be mostly concerned with language and logic. I will not discuss in detail other functional regions of the brain, all of which globally intercommunicate with one another through various pathways. An important concept in regard to brain function is the theory of neuronal groups, clusters of neurons that have multiple connections with other neuronal groups. Depending upon the degree of conflicting stimulation or inhibition mediated through hormonal and neurotransmitter activity, certain interconnected channels of transmission may become more operative than others, sometimes transiently, sometimes permanently. Neuronal groups are plastic to some degree, and a change of function can occur through a process of reentry and degeneration in these groups, resulting in a change in neuronal maps (Edelman, 1989). All of these internal autoplasmic processes are open to being influenced by the alloplasmic intrauterine and extrauterine environment. Although the brain functions globally through stimulatory or inhibitory interconnections between various regions, studies of lesions and accidental or experimental damage to the brain have provided information about the location of various functions in various regions of the brain which

determine how internal and external stimuli reach awareness. The phenomena explored include such things as knowledge without awareness; hemi-neglect, in which one hemisphere ignores the other; blindsight, in which the subject responds to things that he says that he cannot see; amnesia, aphasia, dyslexia, apraxia, attention, neglect, visual scanning and saccades; the need to establish a vertical line and orient objects in space; prosopagnosia, in which the subject shows autonomic responses to faces he says he does not recognize; and double dissociation. Except for instances in which the corpus callosum is severed, functions of damaged areas may be compensated for somewhat by other regions via alternate pathways. Memory can be divided into declarative memory (what is), and procedural memory (how to). Declarative memory can be subdivided into episodic memory, referring to past events in a person's life, and semantic memory, which refers to knowledge of the world. Memory can also be divided into short term memory and long term memory. The amygdala and the hippocampus appear to be involved in short term memory, and the medial temporal region in long term memory (Squire, 1987). The registration of long term memory and the subsequent recall of an event or task may be impaired by the intrusion of a concurrent or immediately following experience (Kandel, 1989). The above mentioned authors speculate about what degree of ontogenetic brain development might be necessary for memory and consciousness to develop. There is a hierarchy in the processing of stimuli, moving from perceptual categorization, to conceptual categorization, to thinking, and then to the development of language. In perceptual categorization a beginning sense of bodily self and non-self develops from processing internal and externally generated stimuli. In conceptual categorization the sense of self and non-self are further solidified. These processes may, or may not ever, become conscious, but nevertheless they influence and are influenced by conscious processes. It is not necessary to think to have concepts, which are mainly "imagery" (Edelman, 1989). It would follow from these studies that the non-speaking, possibly, but not necessarily not-conscious unborn, could be doing a lot of remembering, conceptualizing, feeling, and primitive thinking. There is general agreement that consciousness develops in conjunction with the use of words. We do not think in words until after we have been talked to and we have subsequently talked to ourselves in an internal dialogue. Primary consciousness is a term for a preverbal level of consciousness that precedes a level of consciousness termed higher order consciousness. Higher order consciousness is defined as the capacity to use words in a narrative about oneself, and includes the self reflective capacity to know oneself as distinct from others. The authors underscore the unique value scientifically of a subject's conscious verbal reporting of his personal experiences. "A knower and a reporter of such things in such terms is what is me." (Dennett, 1991). Although this is true, it is often problematic whether conscious reporting of the subjective experience of events correlates accurately with the occurrence of external events as experienced, perceived and reported by others. It is difficult to know whether a bat, a computer or a robot has consciousness since they do not report their experiences to us in words. The unborn baby, however, is a unique subject to study relative to the question of consciousness, for he can speak at a later stage of development. He potentially can report a narrative from memory of events occurring prior to the acquisition of the ability to speak. If we consider the ability to use language as a necessary condition for consciousness, it would follow that the unborn baby does not possess higher order consciousness in utero. This does not mean that he does not have memory, or that he does not have perceptual and conceptual categorization, "imagery," and thoughts without words. He may conceivably have developed some degree of primitive internal dialogue and limited higher order consciousness from having been talked to through his mother's abdominal wall. An informative article that attempts to study brain development and function intrauterinely, rather than phylogenetically and postnatally, is "Early Infant Development from a Biological Point of View," by Anders and Zeanah (1984). The authors review several studies, including many which document the various sensory, hormonal and biochemical mechanisms by which the unborn baby is in communication with the outside world. In addition to the importance of the unborn baby's being the recipient of direct sensory stimulation, they emphasize that the mother's behaviors and emotions internally affect the developing fetal nervous system through the transmission of various substances via the umbilical cord. Even these researchers,

however, hesitate to get into issues of awareness or mentation, focusing mainly on the effect of maternal stress on the soma of the unborn. Connolly and Cullen (1983), in their research correlating maternal stress with abnormal physiological responses to stress in neonates, focus similarly on the soma, but they do point out the increasing interest, their own and that of other researchers, in prenatal cognition and "meaning" in stress responding. "Clinicians, on the other hand, may assume that cognition awaits birth before getting under way. There is no good biological reason for this assumption: Indeed, there is good evidence to support the view that in utero the fetus is already using its CNS to psychobiologically "know" its environment" (p. 281). PEDIATRIC AND OBSTETRIC STUDIES We do know some observable facts about the unborn. They open their eyes at seven months and, although living in a shadowy world, probably see a reddish shimmer. They respond to bright light by shielding their eyes with their hands, react to sound from the fourth to the fifth month after conception, and can recognize and retain a memory of their mothers' voices and musical tunes to which they have been exposed during the last three months prior to birth (Nilsson, 1990). They breathe (Rigatto, 1989), smile, frown, have REM sleep, which we usually associate with dreaming, have cycles of wakefulness and sleeping, kick, climb the walls, right themselves, suck their thumbs, have varying periods of greater or lesser activity, and respond to being touched or spoken to through the mother's abdomen (Brazelton and Cramer, 1990). The unborn probably can smell and taste, as evidenced by this capacity being seen in premature infants, and research is underway to study this further in the unborn (Beauchamps, 1992). It has been demonstrated in sheep that the senses of taste and smell are functioning intrauterinely, and use has been made of this to facilitate bonding between adoptee newborn lambs and adoptive ewes (Smotherman and Robinson, 1989). The unborn live in a very noisy intrauterine environment, with a background noise level of 81 decibels, which is 6 decibels higher than the level of 75 created by traffic on a busy street intersection. Ordinary conversation at three meters is 60 decibels. 90 decibels is a billion times louder than barely discernible sound, and the level in a boiler factory is 130 and painful. There has been concern about possible damage to the unborn's hearing from acoustic stimulation used as a responsivity stress test by obstetricians, a test which increases the intrauterine noise level considerably. Smith et al. (1990) measured the intrauterine decibel increase when this test was performed and found that the basic average background intrauterine sound level increased from 81 decibels to 101 in seven out of nine tests and to 110 in the remaining two. The possible registration of sudden and alarming increases in intrauterine noise, either from acoustic testing or other sources during prenatal life presumably could have deleterious effects on the neuronal and mental structure of the unborn, who is living in an environment in which the noise level is already above that on a busy street intersection. Biochemical changes occur hi the unborn in response to its environment. They have elevated 6-endorphins when their umbilical cords are repeatedly traumatized by needles (Lockwood et al., 1991), and their adrenaline and noradrenaline levels at birth are higher than any time in later life (Nilsson, 1990). There has been increasing concern and attention being paid to pain experienced by the baby during delivery (Scanlon, 1991) and circumcision (Schoen and Fischell, 1991), and anesthetics have been used to soften the psychic impact of these experiences on the baby (Truog and Hickey, 1991). The sensual pleasure and sense of mastery to the infant as well as the mother in childbirth should not be underestimated. One woman patient told me that she experienced an orgasm during the birth of each of her two children, and it is not beyond the realm of possibility that infants experience something similar during birth. Maternal stress during pregnancy has a deleterious effect on birth weight (Newton and Hunt, 1984) and neonatal irritability (Zuckerman et al., 1990). There has been an increasing interest on the part of pediatricians and obstetricians in prenatal physical development, concern about the effect of smoking, alcohol and drugs on the unborn, and the development of increasingly effective means of facilitating the survival of premature infants. Neonatal pediatric surgeons are operating on the unborn baby in utero to correct physical defects. AIDS has stimulated an increased interest in the unborn and their families (Walker 1991). One study reports the intrauterine contraction of AIDS by only one monozygotic twin (Falloon, Weiner and Pizzo, 1989). Bracha et al. (1991) and Bracha (1991) have proposed that there is an intrauterine insult to the unborn, between

the fourth and fifth month of prenatal life, which may account for dysmorphogenesis of the skin of the back of the right hand, damage to the left brain, brain asymmetry, and the development of schizophrenia in one of two monozygotic twins.

ULTRASOUND STUDIES Ultrasound studies are giving us an unusual opportunity to visually observe the physical development of the unborn, and to speculate on his mentation and communication (Piontelli; 1987, 1988, 1989). Piontelli, along with the unborn's parents, observed developing unborn babies at monthly intervals from the 14th week after conception till birth. She subsequently followed their families' development for a year post-natally. One of these unborn babies, who had had the cord tightly wrapped around her neck in utero, repeated this experience as a toddler in therapy two years later, coming repeatedly to sessions with chains double-twisted and knotted around her neck. She also reenacted sexual intercourse in a most erotic fashion, and had a passion for getting into holes. One unborn baby was more animated in utero than in early infancy, although in most instances the unborn baby's temperament in utero was similar to that manifested after birth. One of the pairs of twins observed held hands in utero. Their relationships with each other and with their parents postnatally resembled what had been observed prenatally. Although Piontelli has been impressed by the seeming recall and reenactment of intrauterine experiences in her work with small children, she tends to regard neonatal temperament as primarily genetically determined, or determined by the unborn baby, rather than partly determined by parents-unborn baby interactions, or unborn baby-unborn baby interactions during pregnancy. Whether, or how, in therapy she helped the infants or toddlers connect their current behaviors with memories of intrauterine life is unclear.

THE AUTISTIC IMPEDIMENT The study of prenatal mentation and communication has unfortunately been impeded by the assumption of researchers that the unborn is autistic, i.e. non-interactive socially. (The term autistic comes from Bleuler's classical designation of autism as one of the four primary symptoms of schizophrenia, along with ambivalence, loosening of associations and inappropriate affect.) This autistic assumption became entrenched, perpetuated, and reciprocally reinforced, by invoking it in the literature to describe early infancy and autism, thereby not only contributing to the continuation of an erroneous characterization of the pre-nate, but to a distortion of our understanding of the neonate and of autism as well. For example, in regard to the neonate, Mahler, Pine and Bergman (1975, p. 41) used this assumption in speaking of the autistic phase of early infant psychic development. "In the weeks preceding the evolution to symbiosis, the sleeplike states of the newborn and very young infant far outweigh the states of arousal. They are reminiscent of that primal state of libido distribution which prevailed in intrauterine life, and which resembles the model of a closed monadic system, self-sufficient in its hallucinatory wish fulfillment. Freud's (1911) use of the bird egg as a model of a closed psychological system comes to mind: *one example of a psychical system shut off from the stimuli of the external world, and able to satisfy even its nutritional requirements autistically ... is afforded by a bird's egg with its food supply enclosed in its shell; for it, the care provided by its mother is limited to the provision of warmth*' (p. 220 n, italics added)." They continue, "In the normal autistic phase there is a relative absence of cathexis of external (especially distance-perceptual) stimuli. This is the period when the stimulus barrier (Freud, 1895, 1920), the infant's inborn unresponsiveness to outside stimuli, is clearest." This unsubstantiated assumption about the unborn's mentation and communication is paradoxically echoed in a passage in Brazelton and Cramer (1990, p. 181) that contradicts their documentation elsewhere of influential communication between the parents and the unborn baby, communication which they say represents the beginning of hatching and attachment (p. 21). A distraught mother who was concerned that her mental state during pregnancy may have been communicated to her unborn baby, who was now an angry neonate, asked, "Was it because I was tense? I didn't want to be pregnant with her, you know. Did I ruin her from the first?" The response from one of them was, "I told her I didn't think that was possible in the uterus, but that I felt that it was affecting her handling of Lisa now." This maternal wondering is reminiscent of Richard's mother's wondering whether her "worriment" had been transmitted to Richard in the womb described in Part I of this paper (Sonne, 1995). The minimalization of the degree of mentation and communication in the unborn and its application to understanding Mahler, Pine and Bergman's

autistic phase, and by extension to understanding autism from which the term autistic derives, actually creates a triple error of prejudging and limiting efforts to understand mentation and communication in all three instances, not only in the unborn, but in the neonate and the presumed autistic child as well. Relative to autism, the mutual enrichment that the study of the unborn and the study of autism can provide for each other has been similarly hampered by the autistic impediment, Tustin (1986), reporting on her extensive and intensive work with autism, gives beautiful and detailed descriptions of her patients' behaviors and verbalizations, yet the data she reports have not been sufficiently harvested. There are numerous examples which, if one is alert to considering the dread of abortion, literally leap off the page, and beg to be interpreted as symbolic representations of prenatal experience. One of her child patients, Antonio (pp. 226-227), enjoyed crawling through a tunnel he had made from a rug, and the first word he ever uttered was tunnel. An adult patient of Tustin's, Mary (p. 153), identified with fish who "turn around and reappear from their holes and crevices." Tustin speaks of these examples in metaphoric terms relative to birth, but does not consider them as symbolically communicative of actual experiences her patients may have gone through, or incompletely gone through, in the prenatal period, and does not interpret them as such. She focuses primarily on early infant experiences, as does Lichtenberg (1989), when discussing theory and clinical work in relation to early infancy research. Not only is the view of the unborn infant and neonate as autistic being called into question by current research on early infant and intrauterine development, the very definition and understanding of autism is being challenged by the work of Goodwin and Goodwin (1969), Crossley (1980) and Biklen (1990) on the use of "facilitated communication" with autistic non-verbal children. These children began to type when their hands were placed on a Canon talking computer by a communication facilitator, who placed the palm of her hand gently over the back of the child's hand without placing the child's fingers on any special key. One child immediately typed, "IM NOT RETARDED." After a comment from the facilitator that of course he wasn't, this child typed, "MY MOTHER FEELS I'M STUPID BECAUSE IH (he back-spaced and crossed out the h) CANT USE MY VOICE PROPERLY." A tear rolled down his cheek as he typed. When Crossley said to him that a lot of people believe that what people say about them is what they are capable of, he typed, "HOW MUCH IS A CANON?" Although these children avoided eye contact, shunned intimacy, and exhibited behavioral and emotional problems, they knew the letters of the alphabet, could count, add and subtract, and understood geometrical shapes. When one older boy was asked what he thought his teachers should do about him, he answered, "SHOOT ME." Similar findings were obtained by Oppenheim (1974), using writing. The children diagnosed as autistic understood language, and although they could not speak, they wrote to others through the computer, and wrote to themselves and to others when alone. They were interested in feelings, not just facts. They exhibited a sense of humor, understood concepts, asked questions of visitors about personal matters, and engaged in conversation with one another in groups. They were interested in geography and social attitudes about them, and were particularly pessimistic and skeptical about whether society would ever find a place, or have enough money for them. Grandin (1986, p. 21) in her autobiography, describes her own difficulty with autism: "Up to this time, communication had been a oneway street to me. I could understand what was being said, but I was unable to respond. Screaming and flapping my hands was my only way to communicate." Although Helen Keller (1902) had a different disability, her description of her frustration in not being able to express her feelings verbally is quite similar to the descriptions given by persons with autism. Other non-autistic people have experienced the same frustration. One of my patients, a twin, described a similar difficulty of being unable to put into words an experience she had had as she passed a culvert while happily walking hand in hand with her twin brother. She, three at that time, connected this comfortable feeling with a definitely familiar image of a tunnel, but since she hadn't yet learned the word tunnel she was totally frustrated at being unable to use this word to describe her feelings to her brother or to anyone else. Biklen, a former skeptic, speculates, both in the basis of his personal experience observing Crossley at work in her "Dignity through Education and Language" program, and from his review of the literature, that these autistic children had an expressive motor apraxia, limiting their ability to speak, but that

they were not impaired cognitively or affectively. Biklen states, "The implications of the DEAL students communications are enormous. Among other things, it forced me to redefine autism (p. 312)." Although the above mentioned work has been primarily in the area of therapy, it presents a challenge to current psychological and neurological models of autism and of the mind, particularly the prenatal and neonatal mind, which base the definition of consciousness so much on verbal ability. The traditional definition of consciousness as requiring the capacity to speak, as well as the assumption that the ability to read and write usually follows the development of verbal language, including talking to oneself, all become questionable. Examining the dread of being aborted raises similar questions about mentation and communication in the unborn.

PATIENT REPORTS
An argument can be made that dream-like reports by patients of their prenatal lives should be viewed as reports of primary conscious perception, or rudimentary higher order conscious perception, and interpreted as such. We know that babies don't talk, mumble, or communicate in our language in utero or early infancy. They may, however, have picked up speech contours, rhythms and patterns of speech, voice inflection and intensity. We could liken their mental state to one we would experience if we were to hear a lecture in a strange tongue, or were to attempt to describe to foreigners an experience that we didn't completely understand, and for which we at the time had as yet no commonly understood language to describe. What better reporter of the language of intrauterine experience could there be than the formerly unborn who has later learned a certain amount of adult language? To us his language is strange, to him our language is strange. Jiminez' (1990) paper on the importance of paying attention to the manifest content in dreams is pertinent to this issue. (George's recurrent dream, described in Part I, is a case in point.) What little we have learned about the psyche of the unborn has come from terrified patients reporting hazy recollections of traumatic experiences. About the psychic state of affairs of the unborn in health we know even less.

WORDS AND STORIES AS CLUES
In addressing the connection of language with consciousness, the language we use for discussion places us in a dilemma. We usually think that the term awareness implies conscious awareness, and generally do not think that we can be aware, or could have been aware or conscious of things "out of awareness" that cannot be, or are usually not expressed verbally. We are not convinced otherwise unless somehow we can acknowledge these experiences to ourselves and to others, and articulate them in words if called upon to do so. It is noteworthy in this regard to consider the words used by adults to characterize certain confining and potentially life threatening situations. They are used in the telling of personal experiences, in stories, and in mythology. These same words could be used equally well to describe intrauterine or perinatal experiences. Words commonly used, to name just a few, are: tunnels, caves, cocoons, nests, ovens, concentration or internment camps, peas in a pod, inside a shell, house-bound, locked in jails, solitary confinement, eternity, at the bottom of a well, hemmed in from all sides, up against a wall, confined, pressured, squeezed, crowded, immobilized, trapped, helpless, water, drowning, up the river without a paddle, up "shit" creek, in the soup, in a tomb, buried alive, no exit, no opening, no way out, in the dark, in a fog, extreme sensitivity to sound and light, robbed, invaded, locked out, a fish out of water, swept away, the bottom dropping out, broken windows, living hell, the pit and the pendulum, drawn into a black hole, lost in space, and feelings of nothingness. These words could be viewed as fantasies which use as analogies what people think an intrauterine experience might be like. They also could be viewed as symbolic representations of dimly remembered intrauterine referents that were transferentially attached to somewhat similar adult experiences. How these words are viewed depends on whether one considers dreams and fantasies as primarily embodying wishes and fears, or whether one considers the possibility that they could be symbolic representations of dimly remembered perceptions of actual experiences. It is notable that laymen seem to find the idea of mentation and memory in the unborn and neonate more plausible than do many researchers. Oral anecdotes abound, such as that of a mother whose neonate responded with excitement whenever a bell rang. The mother realized that, for eight hours a day during her pregnancy, every time she had rung up a sale at her work as a cashier, the cash register drawer had popped out and tapped her protruding abdomen, stimulating her unborn baby both auditorily and tactilely. This was an experiment of nature, difficult to

duplicate in the laboratory. One of my neighbors, an engineer, told me years ago during a backyard barbecue, of a dream in which he was being swept along in rushing water. Off-handedly, he said that his dream probably was a memory of his being born, and he then went on to talk of other things. Since the unborn baby cannot talk, we must rely upon the attempts of adults, or children, to tell us about their intrauterine experiences, or their birth experiences, or their near abortion experiences. Completely independent of the issues of scientific evidence and theoretical formulations, it is heuristically helpful to be inclined clinically to consider that patients' vague descriptions of the state of affairs that might have been experienced by them in utero, as well as during birth and earliest infancy, may contain a great deal of reality to them. Marked positive changes occur in them when we do so. In addition to my experiences with George and Richard described in Part I of this paper, I have had several similar experiences with other patients who showed dramatic changes following the introduction of abortion dynamics into their therapy. One of them was with the twin mentioned earlier, who initiated the discussion on abortion by saying half jokingly that she had had to elbow her twin brother out of the way in utero. She had had a life-long dread of and wish to be aborted both physically and psychologically which centered greatly around this brother. Just as with child abuse and incest, patients may have been trying to tell us about the dread of being aborted for years. Few of us have been open to hearing what they are saying as other than fantasy. Patients often have been incredulous themselves. Psychotic and borderline patients have been trying to articulate their experiences to us and to themselves for years by telling us stories that sound crazy and unworldly to our logical, time bound, "realistic" ears. Some have even physically dramatically attempted to non-verbally communicate by assuming a fetal position. There are rewards from taking the psychoanalytic approach to understanding symbols and symptoms to greater depths, and applying it to examining intrauterine life. Similar rewards have come by doing this in the fields of archeology and geology. For example, Schliemann (Niederland, 1965) discovered the ruins of Troy from reading a story. From a psychoanalytic exploration of world-wide commonalities in religion, myths and legends, plus evidence from geology, architecture and astronomical records, Velikofsky (1950) deduced that worlds had collided in the not too distant past in a catastrophe that shifted the earth on its axis. If post-natal analysis can be likened to archeology and digging underground, a view Freud (who felt a kinship with Schliemann) often espoused, pre-natal analysis could be likened to oceanography and submarine exploration. To help our patients thoroughly retrace their steps so that they can establish an affective narrative continuity to their lives, the stories that they try to tell us about threats of disruption during their lives of intrauterine immersion when they felt almost at one with their mothers must be taken seriously. The common erroneous belief that the unborn baby is part of the mother's body rather than a discrete, sentient being, and the belief that intrauterine life is idyllic or mindless, presume the existence of a non-reflective hiatus between conception and birth. These beliefs, in effect erroneous stories, could be viewed as collective defensive wishes representing a denial of the possibility of intrauterine disruption or separation from the mother, and a reluctance to hear stories suggesting otherwise. THE UNBORN'S WORLD An argument could be made that the unborn baby knows his mother, his father, and their marriage long before he is known by them. He moves, feels the mother's body and the mother's movements long before the mother feels his. He probably feels the alternating rhythmic pressure changes of his mother's systolic and diastolic pulse, but she does not feel his. He hears the mother's heart beat, her breathing and her borborygmus, but the mother does not hear his. He hears what is spoken to him, and may respond, but he cannot speak or make any audible vocal sound unless air is injected into the uterus. He "knows" his mother's sleeping habits, her dietary preferences, and perhaps even her and his father's sexual preferences. He "knows" when his mother has a fever, or is sick. From inside the uterus he can see out enough to respond to a bright light, but the parents until recently could not see intrauterinely at all. From these considerations one can speculate that there could be some beginning degree of separation and individuation in utero, and the development in the unborn of a primitive sense of self and social relatedness. Inchoate descriptions by those whose psychic development has been disrupted in utero could conceivably be one source of information which could help determine whether or not this is true. Such a

primitive stage of self could precede that of the emergent self that Stern (1985) has described as developing in the first two months of postnatal life. If there is more mentation and communication in the unborn than we have previously thought, we could locate the first stage of object relations and separation and individuation as occurring prior to birth. The early infant stage would then be seen as the second individuation, and the adolescent stage described by Bios (1967) seen as the third individuation. Intrauterine experiences, good or bad, could play a part epigenetically in each of these later stages. The attribution to the unborn of a "no self" may be an adultomorphic distortion open to question. Brazelton and Cramer (1990) have called the neonate a "competent executive." Does he just become one at birth? Much of what we see in the separation and individuation process in early infancy may represent a process of the parents' selves and the neonate's primitive self mutually getting acquainted on a new level after the unborn's emergence from the uterus to the new extrauterine locale. The formerly unborn's perinatal experience could be thought of as similar to that of an immigrant arriving in a new country, who is primed to relate but doesn't know the language or customs, nor do the natives, like parents, know his? All the sensory systems of the unborn baby are capable of functioning before birth (Gottlieb, 1971), and he may be waiting both prenatally and postnatally to communicate, in a position between Bion's (Eigen, 1985) faith and catastrophe or Erikson's (1950) basic trust vs. mistrust.

THE UNBORN'S SENSE OF TIME The time sense of the unborn is of interest. The unborn baby may have its own sense of the passage of time. George, one of the cases reported in Part I of these two companion pieces, speaking of himself, felt that five seconds could seem like two months to an unborn baby. The unborn could be used to measuring time by the interval between heart beats. He has recapitulated billions of years of phylogeny in a few months. Adults measure time by the clock, and have a roughly similar time sense. We have assumed that an absence between infant and parent experienced as transient by a parent is experienced as forever by the infant. If we consider George's speculation on the unborn's time sense as a possibility, we could consider that the unborn could experience a few moments of disruption of continuity in utero as lasting "two months." If we extrapolate this speculation to early infancy, a transient absence from a parent may not be experienced by the infant as interminable, but similarly as at least the equivalent of two months duration in adult time. The mind of the unborn and the neonate may be moving at lightning speed, too fast for the parents. The parents may seem to be moving "as slow as molasses" for the baby, who may have a sense of time similar to the sense of time distortion induced by psychedelic drugs in adults. The neonate and his parents may be experiencing an asynchronous culture shock. If so, it will take time until they can calibrate and coordinate their watches. Timiras (1982) has been interested in this subject in his research on the chronobiology of brain development. He has suggested that myelination is not necessary for conduction, and has considered the possibility that the unborn's brain transmits stimuli more rapidly than the adult brain because of the shorter pathways involved. From these considerations of time perception, and the fact that the unborn is developing at a faster rate and has more things happen to him in a minute than is true for many adults in a year, we could consider that a threat of abortion experienced by an unborn baby could be a tremendous chronic or sudden stress indeed.

NON-VERBAL KNOWING IN ADULT LIFE To consider that there is mentation and communication in the unborn is not really as strange as one might initially think. There are adult "knowings," for which we use the term subliminal. They are evident in people's reactions to stimuli of which they say they were consciously unaware, and which they profess not to have perceived. Another example of "knowings" without articulation, is that we may know how to type by touch, but be unable to easily draw a typewriter keyboard. The unborn baby may be similar to the primitive artist, characterized by de Mazia (1958) as someone who "knows but doesn't know he knows." We know many things that we feel or sense, but have difficulty putting into words. Sometimes we can never directly put them into words, but we can express and communicate them in music, art, dance, drama, poetry, sports, combat or love. These forms of expression are probably essential for human relationships, and words without them have limited meaning (Sonne, 1972). Bollas' (1987) term, "the unthought known," pertains to such processes. In the Biblical sense, we "know" someone when we have experienced a fusion with them in

sexual intercourse, particularly at the moment of orgasm when boundaries and thought temporarily disappear. We know and can attempt to articulate this knowing after the experience, not during it. In orgasm, with its potential of creating new life, is it possible that, at some deep level, we simultaneously experience some inarticulate and awesome dimly felt sense of the joy or terror of our ontogenetic beginnings, and a sense of our ultimate death? One woman, who was enraged at having been coerced to have an abortion, told me that often thereafter, during intercourse, she would have an accompanying fear and wish to never have been created at all, but to have remained a sperm and an ovum. Evidence that we equate what we feel to be some sense of the experience of death with our real experience of orgasm is to be found in the French characterization of orgasm as "petit mort" (Sonne, 1969).

STUDIES OF PRIMITIVE MENTAL STATES The work of many researchers on primitive mental states seems to be on the verge of examining the world of prenatal mentation. Consider for example the writings of Bion (1970) on the equation of the container with the contained in primitive thinking, Bollas (1987) on the "unthought known," Grotstein (1978, 1990) on coordinates and dimensions of inner space, and black holes, Klein (de Bianchedi et al., 1984) on a triple parallelism between the body of the mother, the baby and the mind, Jordan (1990) on inner space and the interior of the mother's body, and its relationship to unfolding in the psychoanalytic process, McDougall (1989) on foreclosure, dispersal of affect, ejecting from the psyche and re-presenting, Little (1990) on her analysis with Winnicott, during which she reexperienced sensations similar to those George connected with his birth, Milner (1952) on the boundary between inner and outer, MatteBlanco (1988) on symmetry, asymmetry, and bi-logic, Ogden (1989) on the autistic-contiguous position, Rank (1929) on the trauma of birth, Searles (1986) on experiences with severely disturbed patients, and Sonne (1966) on a sub-idea field from which concepts evolve. Godwin (1990), in writing to propose a quantum metapsychology, has attempted to connect the theoretical physicist Bohm's (1980) ideas of the implicate order of a fundamental realm of unbroken wholeness underlying our perceived world of apparent explicit separateness and fragmentation, to Bion's ideas of a primordial mental field of primitive "thoughts without a thinker" which exists prior to the personality which can "think" them. These authors focus on such things as mental space, formlessness, symmetry, implicitness, explicitness, timelessness, entropy, nothingness and the like, and have had a particular interest in projective identification and primitive mental processes in children and adults. What these researchers have to say is eminently applicable to speculations about the nature of fetal intrauterine experiences containing the "unthought known" dread of being aborted or of interminable confinement. Many of their descriptions could be considered representations of prenatal mentation, and they coincide with the primitive mental imagery and mental processes used by George and Richard, as described in Part I of this paper. It is conceivable that abortion dynamics might well be a major component of the seriously disturbed mental states which these researchers and their patients have studied and attempted to describe. Consideration of the dread of being aborted might further our theoretical and therapeutic understanding of borderline and psychotic conditions, as well as delusions, hallucinations, suicide and homicide.

A SUGGESTED MECHANISM FOR THE INTRAUTERINE NEURONAL AND PSYCHIC REGISTRATION OF THE DREAD OF BEING ABORTED If we take an ecosystemic perspective on the prenatal period, we must consider many systems, and many levels of interaction between systems. The unborn baby is a separate but semipermeable, sentient being, who interacts with his extrauterine environment and his intrauterine environment (which may include unborn siblings occupying the same intrauterine space with him) through many channels of communication. As mentioned, to speculate on mentation and communication in the unborn involves considering the possibility that the fetus "knows" something in a way of knowing that is different from the adult way of knowing. If this is so, we would want to know in biopsychosocial or system terms, how such knowledge might be registered, as well as what knowledge is registered. One might consider the difference between right brain knowledge and left brain knowledge as a way to understand how an imprinting of prenatal knowledge could occur, and what could be imprinted. Scola (1984), citing split brain studies, states that the right brain, which is more connected with limbic structures than is the left brain, particularly in early life,

primarily processes feelings, senses, shapes, time, and relationships. The left brain has more to do with processing words. Right brain knowledge is more global and more affective than left brain knowledge, and has more of a sense of the future and of aspirations and choice. The affect processing right brain and the word processing left brain each seem to have a mind of its own. The affect right brain is ontogenetically gradually linked via the corpus callosum with the more logical word mind of the left brain. If we think of consciousness as defined by the ability to use words, the question is raised whether the corpus callosum linkage could be affected adversely by a trauma occurring in the prenatal period of development. Opatow (1989) has argued persuasively that consciousness, true intentionality, wishing, choosing, and an awareness of the other, do not exist in the newborn. It would follow that his argument would also apply to the unborn. He states that these abilities develop postnatally around the age of three weeks, following the development of negation and cross-modal perception arising from the pain of absences from the breast. I would suggest that perception of these negative, painful, separation and consciousness raising processes could occur at an earlier time. In regard to negation, Scola (1984) cites experiments showing that the right brain in adults is the repository of more negative affect than the left brain. Attempts of patients to describe a somewhat amorphous painful intrauterine state, suggest that there must have been some mental registration of sensual awareness of contrasting states of contact and separateness, pleasure and unpleasure or pain in the womb, and the consequent development of negative affect. As a working hypothesis I would propose that the dread of being aborted comes from an insult, or repeated insults, to the right brain of the unborn. This insult is produced by a disruption of the progression and continuity of processing intrauterine experiences by the perceived threat of abortion. Such a trauma could occur in utero from the transmission of the mother's or the family's psychic state, or other alarming intrauterine or extrauterine alloplastic events, to the unborn baby. The experience of varying degrees of such a trauma may be universal. To speculate that there is an insult to the right brain by the threat of being aborted is akin to the proposal by Bracha et al. (1991) and Bracha (1991) that the left brain is damaged in utero in future schizophrenics. I am, however, proposing that there is a right brain insult as opposed to a left brain insult. This intrauterine insult interferes with the right brain's gradual interconnectedness with the left brain, and produces far reaching consequences, such as form being replaced by formlessness, time being replaced by timelessness, the precocious development of affectless language, and a preoccupation with safety. It also could result in the development of a restitutive predisposition to a defensive hyper-intellectualism and hyper-aggressiveness postnatally, as exemplified by George and Richard. Such a predisposition could facilitate individual biological survival but not necessarily produce loving, feeling people. Post natally the traumatized formerly unborn attempts to clumsily describe this experience of disruption in words, or acts it out. In support of this hypothesis, in addition to the other data presented herein, I would cite the suggestion by Livingston (1967) that there can be "Now Print" processes involving the reticular formation which can establish "flashbulb memories" (Brown and Kulik, 1977) when highly stressful, possibly terrifying events occur, events that presumably have influenced evolution and child and adult development. Fride and Weinstock (1988) have demonstrated that unpredictable prenatal stress in rats results in permanent alteration in dopaminergic activity and cerebral asymmetry. Kandel (1989) has outlined how protective mechanisms against noxious stimuli in the invertebrate marine snail, *Aplysia*, produce new growth of neurons called varicosities, which establish long term memory. This occurs via various neurotransmitters and other molecular biological mediators which evoke previously dormant genes into activity. He speculates that this mechanism might have applicability to an understanding of the origin of neuroses, and that a change in varicosities could occur when new learning occurs in psychotherapy. It is conceivable that such an establishment of long term memory through the development of neuronal varicosities could occur in the traumatized unborn. A change in varicosities could occur from his later new learning in psychotherapy as he clarifies the vague origin of his dread of being aborted. Kandel predicts that further refinements of brain imagery techniques will result in the definition of mental and emotional illnesses being based on neuronal function rather than on clinical signs and symptoms, changing our diagnostic

classification system in DSM IV. He also predicts the use of brain imaging techniques in outcome studies to demonstrate neuronal change resulting from new learning in psychotherapy. Brain imaging techniques may soon be able to explore the mental processes and communication in the unborn. They may also be used to study other non-verbal humans such as autistic children, and locked-in brain damaged patients (Kaufman, 1990) as well.

FAMILY IMAGE DEFICITS In considering the possibility of mentation and communication in the unborn, it is important to take a biopsychosocial and ecosystemic perspective and think beyond just the mother-unborn dyad and include the father-unborn dyad and the mother-father-unborn triad in the prenatal period. This perspective is being written about more and more recently in regard to the post natal period, with several authors emphasizing the importance of viewing the infant's development as involving a three person process, very much including the role of the father and the parental marriage as important environmental ingredients which can help the mother and infant to emerge from their state of seeming oneness (Abelin, 1971, 1978, 1980; Robbins and Sadow, 1974; Seligman, 1985; Sharpless, 1990; Sonne, 1991; Wooster, Hutchinson and Evans, 1990). If the father does not intrude into the mother-infant dyad, or if he is excluded from it, and if the marriage is not a reasonably cooperative one, the infant suffers a deficiency of these ingredients, and may develop a family image deficit (Sonne and Lincoln, 1966). He may remain pathologically and fearfully attached to the mother. A healthy family image, a triangular heterosexual sense of reality, and a "triadic self" develop when the parents are able to provide for the infant a psychological family, which is the external functioning of the internalized family images of the parents (Sonne, 1980). Applying these concepts to prenatal life, we can consider that the family ambience, whether colored by the presence of a healthy or deficient psychological family, could be communicated to the unborn and have a direct bearing on his intrauterine experience.

Piontelli's (1987, 1988, 1989) descriptions of parents as they observed their unborn suggest the presence of an unhealthy ambient psychological family on the part of some of the parents. In instances in which the neonates fared less well there are descriptions of gender bias, an uninterested father, a critical mother, and marital splits. Although Piontelli leans toward a genetic basis for the unborn's temperament in utero, I would consider the likelihood that the family image and psychological family deficits present in the families she described were operative from conception or before, and that they had influenced the development of the unborns she studied. In both George's and Richard's lives, described in Part I of this paper, the ingredients of a healthy psychological family ambience appear to have been lacking. The fathers were uninvolved, the mothers had little respect for them, and the marriages were marginal. We can infer that the pathological family structures present after the birth of George and Richard were probably present during their intrauterine lives. We know of the mental notations of the mothers, indirectly from George's reporting, and directly from Richard's mother. They made decisions without consulting or considering the fathers, and were not functioning in a cooperative marriage. Preceding generations seemed to have been similarly matriarchal. As unborn and newborn infants both George and Richard probably experienced continued immersion in symmetrical relationships with their mothers which were characterized by the feared and wished for mental imagery and thought processes which have been described. Experience in a one-to-one therapy could conceivably perpetuate a failure to develop a family image unless an awareness of the possibility of a triadic transference of a pathological family image were kept in mind (Sonne, 1991). George was able to construct his own family image after eradicating the barrier of his internalized imagery of his observing, non-involved father. He actually began to use the term family image on his own. The heterosexual co-therapy family work with Richard seems to have been particularly helpful, in that the infant-mother dyad was able to be dealt with directly with the help of other family members present. The co-therapists' "marriage" served as a stereoscopic, high resolution, multi-level observing, and interactive unit that included both an individual male and female perspective and a shared heterosexual relationship perspective. It was a relationship upon which pathological family images were projected and revised. The co-therapy "marriage" was also a life affirming and heterosexually cooperative marital and parental model which was accepted and identified with by Richard and his family (Sonne and Lincoln, 1966).

MULTIGENERATIONAL

TRANSMISSION OF ABORTION DYNAMICS A family history of abortions over several generations is often found in patients who abort or who have a wish to be, or a dread of being, aborted (Sonne, 1975). In this regard it is interesting to speculate on the biopsychosocial transmission of abortion dynamics from generation to generation, and the phenomenon of anticipation in the psychological realm. Such a transmission could progress from a dread of being, and a wish to be, aborted, to a wish to abort others, to a wish to not have babies at all, and perhaps lead to an extinction of the family line. Such a progression was evident in Richard's family. Richard's mother wished she had been aborted. Her sister, with whom she lived when first married, had had four abortions. Although Richard's mother denied having abortion impulses, she had sought to abort Richard, and had encouraged her other son and his wife to have an abortion. Richard, in turn, was in dread of being aborted, but partially acknowledged his abortion wishes and his monumental hostility to women and to his brother. Both he and his wife had acted out in aborting one of their unborn babies, and had had one miscarriage, which may have represented the operation of unconscious dynamics. In the next generation, Richard and his wife's daughter, prior to working things through in therapy, says that she does not want to have disgusting babies squirming inside of her at all and wants to renounce motherhood totally. Anders and Zeanah (1984, p. 58) cite the work of Skolnick et al., (1980), who demonstrated such a process of intrauterinely originating transgenerational transmission in rats. Their research was not focused on abortion or miscarriage, but they found that rats separated prematurely from their mothers had an increased susceptibility to stomach ulcers, and so did their offspring. "Cross-fostering studies demonstrate that these effects are transmitted to the next generation during the prenatal period rather than by changes in the mother's behavior toward her infants after birth."

CONNECTING THE WORD ABORTION WITH FEELINGS OF DREAD The unborn baby does not know the word abortion. We adults do. The questions arise, "How does one connect the word abortion with feelings of dread, who does the connecting, the analyst or the patient, and how does this help someone?" With George, the patient did it first, with my saying such things as, "It could be," "What else comes to mind?" or "Yes, I can see that." I did not tell him that what he was saying was impossible or didn't make sense. With Richard, I, the analyst, brought the subject into the dialogue by asking Richard's mother if Richard had been a wanted child. In each instance there was either a readiness in me, and in the case of Richard, in my female co-therapist as well, to consider the existence of prenatal mentation and communication, or at least to not dismiss such a possibility. This posture on the part of the analyst is necessary for an opportunity to be present for the patient to connect the word abortion with feelings of dread. Since my experiences with George and Richard, I have become bolder in facilitating the emergence of abortion material. I have been astonished at the flood of associations and changes in the direction of more assertive self expression following my casually asking patients, when they are talking about such things as feeling trapped, if they have ever had any intrauterine fantasies. When the word abortion is connected with feelings of dread, the ongoing flow, movement and continuity of life can be reestablished. The "going on being" (Winnicott, 1949) is resumed. The process of connecting makes sense out of an organized confusion, and opens the way to new paths of life, new learning and experiencing. The process of reconnecting is in itself an animation, a synthesis as opposed to an analysis. Psychoanalysis, part of which is regressive and entropic (destructive), akin to Edelman's degeneration in neuronal groups, is insufficient without psychosynthesis, which is negentropic (creative), and akin to Edelman's reentry and the restructuring of Kandel's neuronal varicosities. This synthesis cannot be the last word, however, or a new emotional deadness will replace the old. Barrett (1991) has cautioned that raising consciousness in analysis, which generally, but not always, involves putting things into words, can have a repressive/resistant result. He emphasizes being aware of the immanifest, invisible, and indefinable flow of life, which he connects with affect and desire, as a component of an interpretation. George's mother had the last word with "word bombs," as did Richard's mother when she told him that, as an unborn, "You weren't you then, you were just a period." These comments were metaphorolytic (Sonne, 1964; 1972) and deadening.

POLYSEMY AND SYNESTHESIA Words can be denotative and connotative. They can have multiple meanings, not just one.

There also is a difference between the meaning of a word and the sense of a word. The sense of a word has been emphasized by Vygotsky, as reviewed by Wilson and Weinstein (1990). Olds (1990) speaks of a "gestaltic, affect laden mode" of mentation which he attributes to the right hemisphere. He connects consciousness and language to activities of the left hemisphere. The true richness of language comes from a blending of mental processes from both hemispheres. This is what happens when the word abortion is connected with feelings of dread. Feelings of dread are replaced by feelings of hope and joy, and words start to make sense. The use of words by George and Richard had been narrow. Connecting the right word with the right feeling seemed to free them to use words in a richer way. George read and wrote poems, Richard became the poem he'd always wanted to be. Their speech became polysemous and synesthetic. In everyday life, words are polysemous, and it is the way in which they are combined, and affectively inflected that makes sense out of words. They can also be used synesthetically, through being combined with words from different senses in a way that "logically" does not make sense, but makes more sense. To say that the dawn comes up like thunder, the cheese is sharp, she is a cold person, it was a cutting remark, the prose was purple, that idea stinks, or his words were hard, is to use the wrong words, but the right ones. For words to have more than a narrow, sanitized, logical meaning, they must be laden with affect, and this is often conveyed by giving the precise meaning of a word a different sense by the use of synesthesia or metaphor. To deny the unborn baby the capacity for awareness, and insist that he must think logically in order to be thought of as aware or conscious, may be to miss the origin of synesthesia and polysema. It may be the prenatal infant in all of us, who has it "wrong," who later adds life, color, and artistry to our logical words. Some examples may illustrate both polysema and synesthesia: A rose is a rose is a rose. A period is a period is a period. A period can mean menses, punctuation, a cycle, a chemical table, a geologic age, a time of life, and "That's it, the end, period!" Recall Richard's mother's statement to Richard, "You weren't you then, you were just a period." It can be a dot marking the point or locus where one is, pauses, departs from, arrives at, or where one can be found. Descartes, who influenced much of our current view of reality, was fascinated by the narrowly defined period, the dot, the point. He was also preoccupied with the question of whether or not he existed. As a logical thinker, Descartes, similar to George and Richard, may have not been truly alive, in the sense of using language polysemically and synesthetically as described in the previous paragraph. What do we mean when we say a life is a life is a life? What is the color, sound, smell, taste and touch of being alive? An abortion is an abortion is an abortion. What is the sense of an abortion? What color is an abortion, how does it sound, how does it feel, what does it look like, how does it smell, how does it taste? The sense of the word abortion is the antithesis of the flow of physical and mental life. This sense of abortion can be expressed psychologically. For example, every time someone has a good idea, he or someone else may disagree. If someone starts to expand his mind, he or someone else may block it or constrict it. Every time someone wants to move forward, he or someone else may tell him to stop or go backward. Every time a person wants to have a baby, he or someone else may tell him not to. Every time a person uses the wrong word, he or someone else may correct him and tell him he's talking nonsense. The word abortion implies stopping life in many dimensions. Reconnecting restarts it.

COUNTERTRANSFERENCE AND TRANSFERENCE RESISTANCES RELATIVE TO THE DREAD OF BEING ABORTED It is important to examine the existence and origin of transference and countertransference resistances that may impede and may have impeded the exploration of prenatal mentation and communication, and the exploration of abortion dynamics. These resistances can be operative in the individual analyst, psychoanalytic scholars, non-psychoanalytic researchers in multiple disciplines, and in society at large. I asked myself why I hadn't been more alert to nascent abortion dynamics in my patients, and why I hadn't written more on them. The more I thought about it, the more I realized that, even though I was interested in abortion dynamics, I hadn't explored them in depth or written much about them. I found the topic easy to ignore, and colluded with my patients in avoiding it. I expected criticism and skepticism from my patients, as well as my colleagues, if I addressed it, and this is exactly what I did, in fact, frequently experience. In analyzing myself, I

ultimately came to realize that I had to some extent the same abortion fears and wishes within myself that my patients had. I had inadvertently allowed myself and my patients to continue in a situation in which they, I, or both of us, risked being "aborted." I was both the parent(s) and the unborn baby. Although a matter of timing is certainly a factor to consider as to when and how abortion dynamics surface or are dealt with, I have come to see that I was co-immersed in a compartment of symmetrical and implicate thinking with my patients in the primary process womb of a shared unconscious world, symbolized by my consultation room. If the analyst is more resistant to considering the possibility of a dread of being aborted than is his patient, it would take a courageous patient to bring up such a disturbing subject. Consider the difficulty of communicating to a closed or unreceptive mind, a cloudy and retrospectively contaminated recollection of a shadowy and frightening experience which occurred at a stage of development when psychic comprehension was limited. Add to this the fact that the experience was mostly repressed, and that, to the degree to which it is consciously considered, it is avoided. By contrast, consider how it would feel for a patient to be able ultimately to say, "Now I know what I was dreading, but I'm safe now." When abortion dynamics ultimately entered the therapeutic theater and were named, I felt a sense of happiness, light-heartedness and liberation which was similar to that felt by my patients. Although empathy is important, I have come to question the necessity of prolonged anguishing or over-identifying with patients when feelings of dread and a sense of formlessness and timelessness present themselves. If one understands his own abortion dynamics and accurately pin-points and diagnoses an underlying dread of being aborted in his patient, anguishing or over-identifying with the patient is less likely to occur, and the need for physically comforting parameters of psychoanalysis such as Winnicott's (1949) holding Little's (1990) head as she reexperienced her birth, is unnecessary. In the case of George, no variations from "classical" technique were used, unless a receptive attitude to hearing and exploring abortion dynamics and an interest in vague memories of intrauterine mental life could be considered such. In the case of Richard, it was I, the analyst, who introduced these topics by asking Richard's mother in Richard's presence if Richard had been a wanted child. The use of a heterosexual co-therapy team and family therapy were parameters of analysis that facilitated the resolution of Richard's dread of being aborted, but the resolution occurred via verbal means. Having resolved my own feelings about myself, I was very pleased to have understood and helped George and Richard, but I neither felt any great empathically anguished concern for either of them nor any feelings of condemnation of their families. I felt balanced, able to be involved and yet apart. I have puzzled over why there is so little frightening affect emerging upon resolution of the dread of being aborted, rather there are feelings of relief and euphoria. It has occurred to me that the affects of fright and suffering have already been experienced over time prior to the discovery of what they had been afraid of, and hence the patients feel no need for further suffering. The danger is over, they are happy to be alive and to understand what had happened. They quickly consolidate and move on, the way someone might do who just had a narrow escape from an accident while driving his car. Relative to resistances in the psychoanalytic community, it is noteworthy how comparatively little has been written on abortion dynamics in the psychoanalytic literature, even by those who are very interested in primitive thinking. I have wondered if in our immersion in the unconscious, we have had ears that cannot hear and eyes that cannot see, in the sense that one is unaware of one's heartbeat, or does not see the water in which one is swimming. We have all had analyses terminable and interminable (Freud, 1937). The dynamics of our career choice (Kubie, 1953) are important to consider when examining possible resistances to exploring abortion dynamics. Analysts usually omnipotently treat patients in a dyad from which others are excluded. I have wondered if this isolation contributes to a delay in considering abortion dynamics, and whether my bringing in a female co-therapist and other members of the family was the step that facilitated exploring abortion dynamics in the case of Richard. The failure to address abortion dynamics may have contributed to the occurrence of negative therapeutic reactions, interminable analyses, and the abortion of analyses by premature termination. We can certainly delve deeply into and emerge from the unconscious most of the time, but we may not dive deeply enough to reach the submarine level necessary to examine abortion dynamics and prenatal

mental life, and then resurface. Additional evidence of resistance can be seen in the fact that most of what has been written on abortion dynamics has been mainly on mothers, either on their motivation to abort, or their reactions after having had an abortion. There has been little emphasis on the dynamics of abortion survivors, or on the role of the father and the parental marriage in the prenatal period. It is also of interest that most psychoanalytic studies of early development have addressed themselves primarily to processes occurring after birth, not before. We study the trauma of birth, but neglect the trauma of a dread of being aborted, of being poisoned, torn apart, of never having been born, confined interminably, or being incompletely born, physically and psychologically. We do not connect studies of primitive mental life to abortion dynamics, and give little consideration to the possibility that abortion dynamics may be operative and reinforced throughout life. About resistances in the non-psychoanalytic scholarly disciplines, it is noteworthy that until recently, most researchers seem to have had a wall between them and the unborn when it came to speculating about, exploring or studying prenatal psychological development or prenatal psychological states. Following along the lines of Kubie's (1953) paper on career choice, one could speculate that the ever increasing interest in making directly available to the senses more and more information about minute, immanifest and remote entities and processes could be a defensive symbolic expression of repressed curiosity about the forbidden mystery of the secret life of the unborn. Examples of this could include genetics, neurochemistry, neuroimaging, ultrasound, electron microscopy and telescopy, thermodynamics, subatomic physics, telecommunication, satellites, radar, sonar, computers, metal detectors, archeology, oceanography, space travel, and astronomy. If we consider this speculation plausible, we could also consider that there are two defensive mechanisms operating. The first defense is that the curiosity focuses symbolically mainly on the physical entities and processes of everything except the unborn. The second defense is that curiosity about the psychological life of the unborn continues to be almost totally repressed. Paradoxically, these endeavors in the physical domain are revealing and documenting the domain of the psychological. The connection between the thoughts, feelings and motivation of the psyche, and physical entities and processes is coming to be seen as so intimate that the dichotomy between the psychological and the physical is blurring to the point that to define and assign priority to what is physical and what is psychological is becoming very difficult. Scientific disciplines are losing their compartmentalized identities and acquiring hybrid designations. This is particularly evident when one studies prenatal life. As for resistances in society at large, I have wondered if there is a collective social anxiety connected with thinking about the hazards of prenatal life, a denial of competitiveness with the unborn, plus a collective unease about the reliability of mothers to carry their unborn babies to term. There may be an almost universal fear of and a wish to regressively surrender to the womb, or to a state of implicate, symmetrical fusion with the mother, and a fear that father will not provide protection from this. In his paper on ego and reality, Loewald (1951) has emphasized the role of the father in protecting the infant from the dread of the womb. In Richard and George's lives, this protection was not given, or was not available from their fathers, nor, as fathers themselves, for reasons outlined in part I of this paper, did they provide it for their offspring. The dynamics of many men in society today and over history may be or have been similar to that of Richard and George and their fathers. Even though a pregnancy involves three participants, father, mother and unborn baby, it seems in much of the public dialogue as if mothers alone have babies, not mothers and fathers, and mothers alone have the sole power over whether or not the unborn baby reaches term or not. This solitary power seems to be exactly what Richard and George saw in their mothers and in their mates, in viewing them as fearfully omnipotent, and psychologically fusing with them. They identified with them and assumed a similar omnipotent posture of holding others' lives in their hands. A component of society could have a collective wish to similarly abort potential rivals, and a wish to be, and a dread of being aborted, plus a failure to notate the father as a protector of life. These dynamics could be socially acted out as a resistance used to avoid dealing with complex problems of sex, love and procreation. My countertransference problem with the dread of being aborted may have its correlate in the psychoanalytic community in its tendency to neglect examining and analyzing abortion

dynamics in depth. It could also have its correlate in general psychiatry where there is a similar neglect, and a tendency, in issues related to abortion, to focus on situational distress and surface symptom relief for the parents rather than analysis (Dagg, 1991). There may be similar resistances operative in the general academic community and in the larger society.

THE NEED FOR NEW MODELS OF THERAPY AND OF THE MIND If we consider that psychology begins only at birth, our traditional models of therapy and our models of the mind are too limiting. We have a tentative mental set as we listen to patients, expecting things we see and hear to somehow fit with our theories and models of the mind and therapy. How we hear and deal with vague reports of the dread of being aborted is influenced by these models. To consider the dread of being aborted and the possibility of prenatal mentation and communication requires us to reexamine our models. We have presumptions about consciousness which color our therapeutic perspective. Whether our models of the mind say that mental life starts at birth, or begins in the womb, will vastly influence our models of therapy, and define what we consider to be transference and countertransference phenomena. If analysts hold a model of the mind that includes a consideration of prenatal mental life and communication, a major alteration of our models of therapy will follow.

SUMMARY In this paper I have presented research data and theoretical formulations from a variety of disciplines which support the premise that there is a great deal of mentation and communication in the unborn. Data have been drawn from neurological, animal, pédiatrie, obstetric, neonatal, and family system studies, ultrasound prenatal studies, and studies of autism; as well as from considerations of language, and the verbal reports and behavior of children and adults. A mechanism has been suggested whereby a threat of being aborted could be communicated to the unborn, and the dread of being aborted could be registered prenatally as an insult to the right brain. I speculate that this trauma contributes epigenetically to symptom formation, and interferes with polysema, synesthesia, and the subjective experience of and interpersonal expression of affect in postnatal life. The traumatized unborn "knows," but doesn't know he knows, until his dread is connected with the word abortion in the sense and meaning of the word as understood by adults. Countertransference issues are addressed, and the need for models of therapy and models of the mind that include consideration of mentation and communication in the unborn is emphasized.

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