

## Discussion

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### **Infant Research and Prenatal Psychology** **A discussion with Dr. Joseph D. Lichtenberg**

*H. von Lüpke\**

During the 4th International Self Psychology Conference June 15–18, 1995, Dreieich, the discussion related to early human development touched even upon the impact of prenatal experiences. Self Psychology according to recent results in infant research is based on the concept of a competent infant. Until now, the question of how this competence may be developed is not sufficiently discussed – as far as I can see – in the frame of Self Psychology and in infant research.

The Dreieich-Conference presented the unique opportunity to discuss this topic with Dr. Joseph D. Lichtenberg, one of the leading authorities in infant research as well as in Self-Psychology-orientated Psychotherapy and Psychoanalysis. For the final discussion, I prepared several questions for Dr. Lichtenberg concerning those issues which he was kind enough to answer in detail. They relate to Lichtenberg's concept of Motivational Systems as well as to Stern's theory of infant development, especially that of early stages such as the "Sense of Emerging Self" and the "Core Self."

For those less familiar with these concepts I would like to add a brief summary of the main topics.

The Motivational Systems according to Lichtenberg are the need for

- psychic regulation of physiological requirements,
- attachment – affiliation,
- exploration and assertion,
- to react aversively through antagonism or withdrawal,
- sensual enjoyment and sexual excitement.

Stern describes 4 stages during the development of the self:

the sense of an emergent self,  
     a core self,  
     a subjective self,  
     a verbal self.

In the context of this discussion, the concept of the sense of a core self is of special interest. It consists of

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the sense of self agency,  
     self coherence,  
     self affectivity,  
     self memory.

### The questions

*If the foetus (as it is demonstrated by ultrasound)*

- has a great repertoire of different active behavioral patterns even in interaction (twins!) that can be found in their characteristics still in postnatal infant observation;
- sucks on his thumb, touches the umbilical cord, the placenta, avoids the needle during amniocentesis;
- reacts with motor behavior to maternal emotions;
- interacts with slowing down his motor activity during maternal REM-sleep;
- recognizes and memorizes musical and verbal structures:

*what are the consequences for theories about the early development of the self?*

Especially:

- distinction between self and object;
- Selfobject-experience;
- the motivational systems (exploration? aversive reactions? sensual enjoyment?)
- the core self (self agency?)

Isn't it easier to understand the competence of the newborn, if we take birth not as the beginning but as a "transition" in the frame of an ongoing development. Your statement in "Psychoanalysis and Motivation" could be related to the real beginning of life, not only birth:

"... from the beginning, the human being is motivated to perceive, feel, act, learn, and engage, through selfregulation, in a mutually regulatory interactional system."

### The answer of Dr. Lichtenberg

The evidence you present supports a belief that the prenatal activity of the foetus is a significant, often underappreciated, factor in the preparation for extrauterine life. You asked my opinion about the consequences of these findings for the early development of the self (I prefer sense of self) in respect to four issues. I will start with the motivational systems.

*First: the regulation of physiological requirements*

The newborn is prepared for nutrient uptake by prior experiences of sucking and swallowing and activity throughout the digestive tract. The prior movement prepares the neonate for life in a gravitational field by proprioceptive priming. In addition, a primitive sleep-awake cycle is probably established before birth.

*Second: attachment*

The newborn has prior experience with mother's heartbeat and the sound of her voice both as internal vibration and external sound. As well, father's voice is known but only as external sound. Thus, the newborn is prepared for immediate attachment when talked to and held close to mother's upper body. But the principal work of attachment begins with eye contact and the significance of the face as a center for affect expression. This does not have a prenatal precursor that I know of. However, integrating auditory with visual is not as labored as Piaget's schema would indicate since we now believe that perception is cross-modal.

*Third: exploration and assertion*

While some exploration by touch and sound can be identified, the kind of instant turn-on of interest that goes with eye scanning and focus does not begin as far as I know until birth.

*Four: the aversive system*

We know that the foetus can move away from noxious stimuli, even seem to "hide" in a corner of the uterus. I don't know of any decisive evidence for antagonism. There may be observations of twins pushing the other away as there is suggestive observations of twins kissing. Also, kicking when startled and fist making may be possibilities to verify. On a broader level, the newborns' instant readiness to react aversively strongly suggest priming in utero. There is solid evidence for

*sensual enjoyment*

as an important prenatal motivation – sucking pleasure, lip and skin sensitivity, languid as well as more active movement. No evidence I know of exists for sexual excitement or genital centered excitation.

*Selfobject experience*

If you accept my definition of a selfobject experience as an affective experience that contributes to either a need or desire for vitalization or soothing, then selfobject experiences probably occur prenatally. Of course the usual definition of an experience of being affirmed (mirrored), feeling a twin-like kinship, or idealization would not apply. We know newborns vary along the line of hedonic tonality – some more responsive to sensual pleasure and more readily soothed, some more easily made aversive – fussy, colicky and more difficult to soothe. It may well be that former have more selfobject experiences prenatally as the latter more aversive.

*The Core Self – Self agency*

If you use the schema of Daniel Stern as I do then the emergent self proceeds the core self. "Emergent" emphasizes the transition from intra- to extra-uterine environments. This involves the call on the neonate to be a more active participant in taking in nutrient, in full body response to aversiveness – crying, and in all different states of alertness – from exploratory active to quiescent pre-sleep. This involves developing with caregivers the rhythm of a 24-hour cycle of creating

and recreating affect states and from their consistent recreation to develop the nascent sense of an awakening (emergent) sense of self with a sensing of familiarity. While I can see some basis for a claim of a form of agency prenatally, I believe the core self which develops, say during the second to 8th month is preceded by a period of emergence characterized by making the transition to a different form of mutual regulation during which the infant is a more directly influential guide than the foetus had been.

### Comments

1. The role of visual cues for attachment certainly represents an important difference between pre- and postnatal life. For me, however, the question still remains whether this shift is really the precondition for “the principle work of attachment”. Brazelton et al. (1975) gave a report on the early development of interaction between a blind mother and her infant. The authors state: “After eight weeks, she (i.e. the infant) engaged in mutually satisfying interaction with her mother even though it still appeared distorted. We felt that the pair had overcome the initial violation caused by the mother’s distorted use of visual mode of communication by successfully using other modes, such as the auditory, in its place.” Als et al. (1980) presented a study of a blind infant with normally seeing parents. They conclude: “The study demonstrates that this infant’s development proceeds largely along normal lines, with occasional regression preceding new accomplishments”. Isn’t it possible that attachment does not depend on the specific channel of communication (you mention the cross-modal perception), but on the “fitting together”, the mutual interactional capacity, the “tuning” of the partners in their different equipment as according to age? During prenatal and postnatal life, these channels are certainly different. The shift during birth is filled with new communication pathways, however, old ones are also lost such as the direct mutual influence via placenta (hormones and other humoral transmitted factors). Development, according to this point of view, may not only be a progress, but at the same time loss, always coming to new states of balance. The fitting or not fitting together may be taken as a continuous theme throughout pre- and postnatal life as you mention it for the fussy or colicky babies.

2. The sense of core-self. The aspects you mention are certainly different during pre- and postnatal life. You “see some basis for a claim of a form of agency prenatally”, but why not for coherence, affectivity and memory? Isn’t it perhaps a problem of the concept of “emergence”? In a literal interpretation, one would understand an emerging structure as already complete but only not yet visible. In this point, Stern’s description seems to me somewhat contradictory especially his statement: “The first organisation concerns the body: its coherence, its actions, its inner feeling states. That is the experiential organisation with which the sense of core self is concerned. Immediately prior to that, however, the reference organisation for a sense of self is still forming; in other words, it is emergent” (Stern 1985, p. 46). For me, forming or emerging are completely different processes.

If we take “emergent” as a metaphor for the transition from intra- to extra-uterine environments, as you do, we may state that this transition goes along with chang-

ing manifestations, expressions and ways of interaction, but the basic structure of the sense of core self according to Stern's 4 aspects might be the same during pre- and postnatal life.

Dr. Lichtenberg's reply may represent an important step in overcoming the still existing gap between the results of infant research and those of prenatal psychology. This discussion may enhance the development of a discussion, that leads to a communication between all those who do a specialized research to meet finally in a general concept of human development from the very beginning up to its end with transitions but without limits concerning life events such as birth.

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