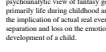


<p>Attachment, Affect Regulation and Mutual Synchrony</p> <p>Heist Kächele International Psychoanalytic University Berlin</p>	<p>The psychiatrist and psychoanalyst John Bowlby</p>  <p>He turned away from traditional psychoanalytic view of fantasy governing primarily life during childhood and focused on the implication of actual real events such as separation and loss on the emotional development of a child.</p> <p>„Although John Bowlby was a psychoanalyst by formal training, he was a true ethologist by heart... Bowlby began leading the classical ethological literature in the early fifties.</p> <p>He was especially influenced by the work of primatologist studying mother-infant relationships“ (Shoss 1995, p.185)</p>	<p>Critical Controversial Conceptual Issues.</p> <p>The paper “Grief and mourning in infancy and early childhood” delivered in October 1959 before the British Psychoanalytic Society and in April 1960 at the Columbia University in New York spelled out the critical controversial conceptual issues.</p> <p>Bowlby radically criticized the prevailing psychoanalytic views of development.</p> <p>In Anna Freud’s and M. Schur’s discussion of Dr. John Bowlby’s paper the core distinction – in my view – dealt with the issue of</p> <p>biology versus psychology</p> <p>First biology, then psychology takes over, this was the position of Dr. Schur</p>	<p>Critical Voices from the Psa Establishment</p> <p>Attachment theory was criticized as mechanistic, non-dynamic and replicated according to thorough misunderstanding of psychoanalytic theory“ (A. Freud 1960, M. Schur 1960).</p> <p>Time and again the same reproaches appear: Bowlby is seen as having committed drives, „the Oedipus“, unconscious processes, particular unconscious fantasy etc. or even worse:</p> <p><i>„Bowlby treat humans as if they were animals“</i></p> <p>(Phyllis Grosskurth 1987)</p>
<p>Last famous words from John Bowlby 1988</p> <p>„It is a little unexpected that, whereas attachment theory was formulated by a clinician for use in the diagnosis and treatment of emotionally disturbed patients and families, its usage hitherto has been mainly to promote research in developmental psychology.</p> <p>While I welcome the findings of this research as enormously extending our understanding of personality development and psychopathology, and thus as of the greatest clinical relevance, it has not the least been disappointing that clinicians have been so slow to test the theory’s ideas.“</p> <p>Bowlby J (1982) <i>A Secure Base: Clinical Applications of Attachment Theory</i>. Routledge, London, pp. 10, 8</p>	<p>In the Year 2000</p> <p>Two-fifties years ago very few people from the fields of psychotherapy would have connected the name of John Bowlby with a clinical topic. We searched for the appearance of Bowlby’s work in psychoanalytic and cognitive textbooks in the eighties and nineties and found very few instances.</p> <p>A nice exemplification was the book “Cognitive Psychotherapy” published in Berlin where Lott made „attachment and cognitive“ topics presenting a guideline for the reconstruction of early pathogenic experiences in cognitive psychotherapy“.</p> <p>Dr. Peter C. Blochman M. Peter H. Edel Cognitive Psychotherapy: Theory and Practice, Springer, Berlin, p. 62/76, 1998</p> <p>Even when John Bowlby received the honorary doctor degree at the University of Regensburg in November 1999 none of the German specialized psychotherapeutic journals mentioned this remarkable event.</p> <p>How could this happen?</p>	<p>Theoretical Obstacles</p> <p>Freud’s theorizing remained within the 19th century thinking</p>	<p>19th century principle of constancy</p> <p>However, the 19th century biological “principle of constancy”, which Freud adopted from Fodor, remained a pillar in psychoanalytic theory</p> <p>“The nervous system is an apparatus which has the function of getting rid of the stimuli which reach it, or of reducing them to the lowest possible level; or, which, if it were feasible, would maintain itself in an altogether unmodified condition“</p> <p>(Freud 1915c, p. 120)</p>

Freuds drive/discharge model and developmental psychology

However, today's developmental psychologists take into account that the neurobiologically determined complexity, due to billions of neurons with thousands of interconnections, leads to uncertainty and a limitation in the ability to predict behavior.

This degree of complexity guarantees individuality and assures self-determination. Complexity grows in the course of development. Humans are attributed with the ability to socialize themselves into the animate and inanimate world. Activity generated endogenously represents a fundamental principle which has taken the place of the discharge hypothesis.

Kochlin M, Schickel A, Schneider K, Block KD (2007) Development, attachment and relationships: New psychoanalytic concepts. In: Stone RA, Scharoun N, Schneider K, Lauer HJ (Eds.) Contemporary Psychiatry. Springer, Berlin, pp 199-219

The crisis of psychoanalytic theory and the death of economic energy assumptions

Object relations are not discharge phenomena. Freud's concept of instinct as something arising from within the interior of the organism does not apply to the observation that the formation of object relations is a process of caring encompassing two people to process that does not include elimination or peaks of discharge).

... the concept of instinct itself has not received its necessary backing from contemporary history ... I believe, as does Bowlby, that object relations have their analog in the attachment behaviors of other species (Mandel 1984, pp. 199-200).

Developmental Biology is back

No longer the reference to „after non-human species“ is excluded, on the contrary we find papers like: the use of Somaus discussing

Influence of Attachment Theory on Ethological Studies of Biochemical Development in Nonhuman Primates

In Goldberg S, Blair R & Sher J (Eds.) Attachment Theory, Social, Developmental and Clinical Perspectives. Analytic Press, Hillsdale 1985

5

10

15

What is an object ?

From today's point of view the inner object is not seen as an isolated object, but rather as a memory framed by a context of activity. From both the object representations take place in a multiple context of acts of varying quality. By repeated communicative acts interaction schemes are created, which can become very stable.

Daniel Stern (1985) refers to this active process as the representations of interactions that have been generalized (B&F). He assumes that the infant divides the flow of an interaction into episodes (e.g. feeding) and from repeated similarities (variations) a prototype or schema is built and generalized. This schema guides the expectations and the behavior for the interactional sequence to follow.

Stern DN (1985) The interpersonal world of the infant: A view from psychoanalysis and developmental psychiatry. New York: Basic Books, New York

```

graph TD
    BWO[Behavior with the Object] --> RPIC[Representations of Patterns of Interactivity with Caregiver]
    RPIC --> E[Expectations]
    RPIC --> EX[Experiences]
    RPIC --> SOB[Schemas of behavior]
    E --> SOB
    EX --> SOB
    SOB --> RWB[Repetitive Experiences and Internal Working Models]
    
```

Figure 1 The Relationship of Expectations, Experiences and Internal Working Models of Attachment Relationships

```

graph LR
    subgraph "Hidden Regulations"
        H1[Interactions] --> H2[Internal States]
        H2 --> H3[Regulation]
        H3 --> H4[Stress System]
        H4 --> H5[Brain]
        H5 --> H6[Body]
        H6 --> H7[World]
    end
    subgraph "Loss of Regulations"
        L1[Interactions] --> L2[Internal States]
        L2 --> L3[Disregard]
        L3 --> L4[Stress System]
        L4 --> L5[Brain]
        L5 --> L6[Body]
        L6 --> L7[World]
    end
    
```

11

12

13

A historical anecdote:

In the early twenties of the 20th century, the Hungarian psychoanalyst Imre Hermann writes to the director of the London Zoo asking for his monography on the social life of apes

Ten years later Hermann publishes his forgotten paper on the drive to cling and seeking

Hermann I (1936) Sich-Anklammern - Auf-Sich-Gehen. Int Z Psychoanal 22: 349-370

Kanehl H (2013) A Hungarian precursor of attachment theory: Ferencsik successors, Imre Hermann. American Imago 66: 419-426

The biological basis of attachment theory I

- Attachment is an inborn system in the brain that evolves in ways that influence and organize motivational, emotional and memory processes with respect to significant caregiving figures
- At the most basic evolutionary level, the behavioral system improves the chances of the infant's survival

(Siegel D : 1998, The developing mind)


M. Hofer's work on hidden regulations, spots out that regulatory interactions appear to be capable of reducing the searching and proximity seeking behavior directed toward an increasingly specific object that is the hallmark of attachment behavior

M. Hofer: Hidden Regulations. In: Goldberg S, Blair R & Sher J (1985) Attachment Theory, Social, Developmental and Clinical Perspectives Hillsdale, Analytic Press

14

15

16



For two years, Australian film makers lived with this mother in a remote valley...

Follow the destinies of two lovable young joeys - a female called Simba whose mother is conscientious and successful, and Jella, a little male full of curiosity and courage but whose mother is casual and forgetful...

80% of young kangaroos do not reach the one year survival, only mothers that provide a **secure** base for their offspring are successful in rear their offsprings beyond that age.

17

The biological basis of attachment theory II

- Repeated experiences with the caregiver become encoded in implicit memory as expectations and then as mental models or schemata of attachment
- Studies of attachment have revealed that the patterning or organization of attachment relationships during infancy is associated with characteristic processes of emotional regulation, social relationships, access to autobiographical memory, and the development of self-reflection and narrative
- (Singer D. J. 1989, The developing mind)

18

Oxytocin and Bonding

- Ruth Feldman, psychology professor at Bar Ilan University in Israel, conducted the first study to demonstrate the links between oxytocin and bonding in human mothers.
- Feldman and colleagues measured plasma oxytocin from sixty-two pregnant women during their first trimester, third trimester, and the first postpartum month.

20

Gaze, Affect, Touch, and Vocalization

- They also observed the mother and child interact, defining the level of attachment along four aspects: gaze, affect, touch, and vocalization.
- Stronger attachment would mean that the mother focused her gaze mostly on the child, exhibited a positive energy towards the child, maintained constant affectionate and stimulating touch with the child, used a "proterose" - speech with the child, and these species-typical maternal behaviors were adapted to the infant's alert state.
- After the mothers completed an extensive survey and an interview on their bond-related thoughts, feelings, and behaviors, the researchers computed the link between levels of oxytocin and bonding.

22

Level of Oxytocin in Pregnant Women Predicts Mother-Child Bond

- Humans are hard-wired to form enduring bonds with others. One of the primary bonds across the mammalian species is the mother-infant bond. Evolutionarily speaking, it is in a mother's best interest to foster the well-being of her child; however, some mothers just seem a bit more maternal than others do.
- Now, new research points to a hormone that predicts the level of bonding between mother and child.

19

Level of Oxytocin in Pregnant Women Predicts Mother-Child Bond

- In animals, oxytocin, dubbed "the hormone of love and bonding", is critically important for the development of parenting, is elicited during sexual intercourse, and is involved in maintaining close relationships.
- Animals with an oxytocin exhibit diverse pup retrieval and less licking and self-grooming. These findings implicate oxytocin in the bonding process, but little research has been done on this relationship in humans.

20

The Formation of An Exclusive Relationship

- The results are fascinating: Initial levels of oxytocin at the first trimester predicted bonding behavior. Therefore, mothers with a high level of the hormone at the beginning of the pregnancy engaged in more of the aforementioned bonding behaviors after birth.
- Additionally, mothers who had higher levels of oxytocin across the pregnancy and the postpartum month also reported more behaviors that support the formation of an exclusive relationship (i.e. singing a special song to the infant, or bathing and feeding them in a special way). These mothers were also more preoccupied by thoughts of checking on the infant, the infant's safety when they are not around, and the infant's future.⁷

23

Ruth Feldman feldman@mail.biu.ac.il

- This study, which appears in the November issue of *Psychological Science*, a journal of the Association for Psychological Science, suggests that women with higher levels of oxytocin during their first trimester are primed to the formation of an exclusive bond with their infants. Oxytocin seems to be preparing mothers to engage in bonding behaviors. The findings also show that oxytocin is related to the mental, as well as the behavioral, aspect of bonding. More generally, this study confirms that there is a cross-species continuity in mechanisms that underlie species-specific expressions of bonding.

24

Attachment - a bridging concept

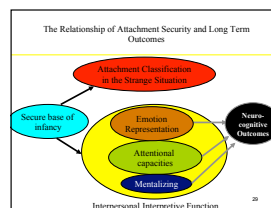
Adult attachment is the stable tendency of an individual to make substantial efforts to seek and maintain proximity to and contact with one or a few specific individuals who provide the subjective potential for physical and/or psychological safety and security. This stable tendency is regulated by inner working models of attachment, which are cognitive-affective schemata built from the individual's experience in his or her interpersonal world.⁸

Berman and Sperling 1994, p.8

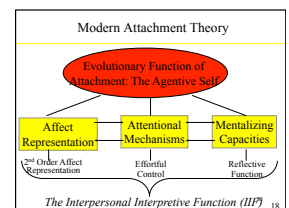
25

Peter Fonagy recently pointed out that the relationship between attachment theory and emotional and cognitive schemata is more complex than it has been generally recognized. In his excellent overview he proposed the following model for the role of attachment in personality disorder:

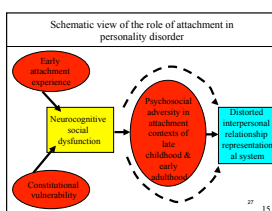
26



28



18




27

A New Attachment Theory Understanding of Move from Infant Behaviour to Adult Representation

- Classical attachment theory:
 - Early relationship representations determine the pattern of adult relationship representations
 - "Silent connections" (neural connections in implicit memory) are reawakened by later adversity
- His contention:
 - Attachment confers a selective advantage to humans by the opportunity it affords for the development of neurocognitive social capacities

28



From this model one may conclude that "The most promising area of attachment research from a psychoanalytic point of view is the study of disorganized/disoriented attachment behavior"

So, Peter Fonagy in his recent comparative monograph.

ATTACHMENT THEORY AND PSYCHOANALYSIS

29