

# Familial Contributions to ADHD: An Attachment Perspective

Attachment theory can suggest new meanings for the symptoms of ADHD and, thus, more effective forms of treatment. The aims of this case study were to identify the attachment patterns of a child diagnosed with ADHD and of his mother, and to consider their relevance to ADHD.

## TEKST

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## ABSTRACT:

This paper presents a case study to illustrate an etiological model of attention deficit and hyperactivity disorder (ADHD) based on the notion that experience shapes neurological development, leading to context-dependent, self-protective attachment strategies and, in some cases, symptoms of ADHD. However, attachment strategies have been difficult to assess in school-aged children, the age group most often diagnosed with ADHD. Here the newly developed School-age Assessment of Attachment (Crittenden, 1997-2005) is used to elicit the focal child's attachment strategy. In addition, the child's mother was interviewed with the Adult Attachment Interview. Both child and mother were classified as «disoriented» within an overall Type A/C strategy. We propose that the mother's variable, complex, and disoriented behavior may not be independent of her child's aroused and agitated behavior. Because neither mother nor child was balanced or secure, their mutual efforts to communicate may have been counter-productive, leading to escalating arousal and confusion.

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Keywords: child psychology, ADHD, attachment, parent-child-interaction, school-aged children

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## EMNER

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## Introduction

Attention deficit and hyperactivity disorder (ADHD) has become a controversial umbrella term applied to a large number of diverse children. The controversy about diagnosis and treatment of ADHD reflects both lack of certainty regarding its etiology and wide variation in its treatment in spite of treatment guidelines recently produced in USA, UK and EU, all of which recommend pharmacological treatment. In the public and political domain, however, there is alarm regarding the increasing proportions of children diagnosed with ADHD and the widespread use of pharmacological treatment. The variability in professional treatment strategies and concern regarding pharmacological treatment suggest a need for researchers to clarify whether ADHD can meet the criteria for a neurological disease condition or whether its etiology and treatment are more complex – as is typical of psychological disorders.

In this case study, we explore the possibility that aspects of the mother–son-relationship influence the development of symptoms that then require control. We should state at the outset that no case study can establish causal relations – either for the case itself or for the category of such cases. Therefore we will not be able to conclude whether family influences cause ADHD. On the other hand, a well-drawn case can establish the basis for hypotheses that could guide properly controlled group studies. We propose a rationale for a novel and theoretically coherent hypothesis worthy of controlled research. Specifically, we consider whether reframing existing findings through attachment theory can suggest new meanings for the symptoms of ADHD and, thus, more effective forms of treatment.

### **Disease and Disorder**

ADHD is a disorder and not a disease (cf., Wilkinson, 2003). That is, it is a cluster of symptoms without a known pathogen or defined course of development. Its diagnosis is usually based on the presence of specific clinical features (as listed in the Diagnostic and Statistical Manual of Mental Disorders IV, American Psychiatric Association, 1994) without assessment of (1) the process by which such symptoms might have developed, or (2) the function that they might serve in the child's life. Three features of the symptoms are important to note. First, the set of symptoms differs considerably from one child to another. We need an explanation for this; it could be that a cluster of conditions, rather than a single and uniform condition, leads to ADHD. Second, the symptoms overlap with those of other disorders suggesting the non-specificity of the diagnoses and the probability of multiple contributors to them. Third, the symptoms begin to appear in preschool-aged children and peak during the school years, with most referrals and diagnoses occurring after children have started school. This suggests both a developmental process to the disorder and one that alerts teachers more than it alerts families. That is significant because *diseases* are more often identified by parents than by teachers, whereas *disorders* may reflect aspects of family functioning that are not deemed unusual by the family until they become extreme, interfere with mastery of new developmental tasks, or are applied to extra-familial contexts. We propose that at least the latter two conditions hold in some cases of ADHD.

The issue of co-morbidity is also relevant because many children with ADHD have other diagnoses as well. When *disease* conditions are co-morbid, there are two distinct pathogens, each with their expected symptoms, e.g., tuberculosis and viral influenza. The case of *disorders*, however, is analogous to non-orthogonal factor analysis. That is, the outcome categories are constructed (as opposed to being natural) and they are not mutually exclusive.

Because ADHD does not meet the criteria for a disease, it must be considered a disorder. This leaves two issues. First, any new explanation must be able to address the biological findings adequately. Second, one or more testable alternative explanations are needed. In applying attachment to ADHD, we are proposing one such possible explanation, specifically one that will provide more nearly orthogonal categories, that are less artificial, and that are more clearly tied to treatment decision-making.

### **Attachment and ADHD**

We explored the functional meaning of ADHD symptoms through the Dynamic-Maturational Model (DMM) of attachment (Crittenden, 1995, 1997, 2002). We chose the DMM because it (1) differentiates many patterns of anxious attachment (thereby having more clinical utility than «reactive attachment disorder» or «disorganized attachment» in which almost all worrisome cases are placed in a single category, i.e., one of these two), (2) highlights the adaptive function within the family context of symptom behaviors (thus emphasizing a strengths approach rather than a deficit model), (3) emphasizes the reciprocal process of development between parent and child, even across multiple generations, and (4) is rooted in the notion that maturation interacts with experience in a dynamic way, thereby creating possibilities for change over time.

It should be noted that the term «attachment» is used in many ways by different researchers. Attachment disorder is a DSM diagnosis; like ADHD it refers to the presence of a set of symptoms and is a disorder of unknown etiology and with symptoms that overlap with other disorders, including ADHD. Disorganized attachment, while not being a DSM diagnosis, is similar in that it is defined by the presence of listed behaviors.

Our use of «attachment» is fundamentally different. The DMM is a *functional* diagnostic method. That is, it does not depend upon the presence of symptoms, but rather on the interpersonal organization of behavior in which any of a number of behaviors could fulfill the function.

The central functions in the DMM are quite clear. Children organize attachment strategies to elicit protection and comfort from parents (or other caregivers). Parents use attachment strategies to protect and comfort themselves, their partner, and all of their children. Thus there is overlap in the functions of child and parent attachment, but the child has only one interest, the self, whereas parents have competing interests (self, spouse, and all of their progeny). In this case study, we use a DMM assessment of attachment to explore whether one child's mother is able to focus sufficiently upon her son's need for protection and comfort and, if she is, whether her behavior is likely to be

protective and comforting. Using another DMM assessment, one for school-aged children, we ask whether the child feels safe and comfortable and, if he does not, what he does to elicit greater protection and comfort. We do not ask whether mother and son love one another; we assume that they do. We also do not ask whether the mother intends well; we are certain that she, like almost all parents, does (Crittenden, 2006). The question is how child and mother communicate around (a) the child's need for protection and comfort and (b) the mother's desire to fulfill this need. The question, in other words, is what attachment strategies each is using and how these might affect the behavior of the other.

## **What We Know Now**

Any new proposition must account for what is already known. In this section, we offer a brief review of the central empirical findings regarding ADHD with the understanding that our DMM hypothesis of an interpersonal parent-child process must account for these findings.

Central to our thinking is the idea that life is organized both genetically and biochemically. Higher life is also organized neurologically and behaviorally. By «organized,» we mean both that there is an inner predictable patterning of activity and also that this patterning is predictably responsive to the changes in its context, i.e., it is in dynamic interaction with its environment. The four layers of organization are nested and systemic. That is, they range from fundamental (genes) to expressed (behavior). Moreover, they are bi-directional (with each level influencing the others) and indeterminant in that with each level can have many possible expressions in other levels and outcomes can have more than one possible pathway from more basic levels. Put another way, the same genes can have different behavioral expressions and a given behavioral expression can have more than a single genetic or neurological basis. Finally, organisms cannot exist without all levels being in systemic concordance, i.e., behavior must have complementary representation at the neuro-logical, biochemical and genetic levels. With this idea, genetic, biochemical, neurological, and behavioral explanations are not seen as being in competition. Rather the question becomes *how* they interact.

Genetically and biochemically, we know that ADHD is characterized by an atypical dopaminergic process (Lou et al., 2004) tied to the dopamine D4 receptor gene (DRD4) as mediating susceptibility to ADHD (El-Faddagh et al., 2004). This identifies the mechanisms of midbrain control of attention and motor behavior as being important in ADHD (Ernst, Zametkin, Matochik, Pascualvaca, Jons, & Cohen, 1999), but does not clarify the origin of the dopaminergic dysfunction as seen in children with ADHD. Although it is generally presumed to be genetic, we note that the same processes could result from environmental causes or from the interaction of genetic and environmental conditions (Halasz & Vance, 2002).

Indeed, there is evidence suggesting that certain family characteristics are associated with ADHD (Taylor, 1994). These include marital discord (Brandon, 1971), hostile

parent–child relationships (Battle & Lacey, 1972; Tallmadge & Barkley, 1983), parents who sought termination of the pregnancy (Matejccek, Dytrych, & Schuller, 1985) and discordant family life (Gillberg, Carlstrom, & Rasmussen, 1983). It is not known, however, whether the developmental mechanisms that underlie these associations initiate, maintain, or result from the disorder (Johnston & Mash, 2001). Among the most important familial influences is the quality of child attachment to the caregiver. Attachment is also the characteristic for which the biochemical evidence has been most thoroughly explored.

The attachment system is a bio-behavioral system whose primary function is to promote the individual's survival, with different organizations of attachment reflecting different strategies for coping with threat (Bowlby 1969/1982). Not only is maturation necessary for person-specific attachment to develop, but attachment relevant experiences, i.e., those requiring a protective attachment figure, are necessary for the development of the executive functions of the frontal lobes (Glaser, 2000). Attachments that are organized around the experience and expectation of security have been associated with lower reactivity of the hypothalamic-pituitary-adrenal axis to stressors (Hertsgaard, Gunnar, Erickson, & Nachmias, 1995; Nachmias, Gunnar, Mangelsdorf, Parritz, & Buss, 1996). On the other hand, anxious attachment, resulting from exposure to chronic or traumatic stress, inhibits development of the orbitofrontal cortex which is crucial to emotional regulation; this may predispose children to impulsivity and hyperactivity (Levy & Orlans, 2000). Thus, very anxious attachment may result in chronic emotional lability as well as unpredictable and intense behavior. In addition, preliminary findings from animal research suggest that D4 receptor mechanisms contribute to stress-induced cognitive dysfunction (Arnsten, Murphy, & Merchant, 2000). In three studies, Lakatos and his colleagues confirmed the link between infant attachment and the dopamine D4 receptor (DRD4) gene, the same gene found to be linked to ADHD (Gervai et al., 2004; Lakatos et al., 2000, 2002).

This suggests an interaction between genetic vulnerability and early attachment experiences, expressed in the form of the symptoms that define ADHD. Based on this idea, Ladnier and Massanari (2000) proposed that ADHD resulted from «bonding breaks». Their review of the histories of children with ADHD indicated that, in every case, the histories contained one or more bonding breaks. That is, attachment might be a necessary component of the etiology of ADHD.

### **A New Hypothesis**

The central issue to be reconciled between the currently dominant bio-deterministic model of ADHD and one that includes environmental input is which model can account for all of the evidence in a parsimonious way: a biogenetic model, an experiential model, or an interactive bio-experiential model. Attachment theory offers an approach to exploring developmental processes that is based on the recognition that brain development reflects the interaction of genetic possibility with actual experience through a biochemical process (Edelman, 1987; Schore, 1994). While some have treated

attachment as one of many sub-theories addressing some corner of development, particularly in infancy, the Dynamic–Maturation Model of attachment focuses on the role of attachment in promoting survival throughout life. Survival is the issue in life; without it nothing else matters. The DMM proposes that when survival is compromised, humans use increasingly extreme strategies to ensure their survival and that of their progeny.

These strategies function to raise or lower arousal, signal need to others, and elicit both feelings in and responses from others. The more an individual focuses on survival, using relatively extreme strategies, the less they can turn attention to other activities, e.g., peer friendships, academic work. Further, extremely high or low arousal will be reflected in neurological functioning and behavior. That is, some neurological and behavioral symptoms of ADHD may be part of a self-protective strategy (e.g., high arousal, hypervigilant-scanning attention) whereas others (e.g., lack of focus on school-work) may be inherent «side effects» of the strategy

### **DMM Attachment Strategies**

Crittenden has proposed a set of more complex Type A and Type C patterns of attachment than the infant ABC patterns accepted by essentially all attachment researchers. The DMM strategies become possible as children mature, and are strategic adaptations that maximize children’s probability of being protected in suboptimal environments (Crittenden, 1995, 1997a, 2000, 2002). (There is no difference in how the various models handle Type B, secure attachment. Because it is not associated with disorder, Type B is not discussed in this article.) At present, there are both a series of theoretical papers and also strong validating data to support the patterns described below for infancy (35 studies) to the preschool years (29 studies, see lists on [www.patcrittenden.com](http://www.patcrittenden.com)) and emerging data regarding adolescence and adulthood (9 studies, see citations in method section below).

Within Type A there are six compulsive strategies for protecting the self. All are characterized by affectless logic, dismissing the self, and accepting powerful others’ perspectives. Display of negative feelings is inhibited or displayed as false positive affect. Semantically individuals using a Type A strategy exonerate their parents’ lack of protectiveness and attribute responsibility for untoward events to the self. Episodes are told from the parent’s perspective or stories of being endangered are changed, such that attachment figures never harm the self. Because their own integrative processes fail, individuals using a Type A strategy rely on others’ understanding. The specific strategies include compulsive caregiving (A3, Bowlby, 1973<sup>[1]</sup>) of vulnerable or withdrawn parent, compulsive compliance (A4, Crittenden & DiLalla, 1988) to aggressive parent, compulsive self-reliance (A6, Bowlby, 1980), compulsive promiscuity (A5, Bowlby, 1980), delusional idealization (A7, Crittenden, 2000) of life threatening attachment figures, and an externally assembled self (A8, Crittenden, 2000) in which personal attachment figures are replaced by an array of interchangeable professional personnel.

Within Type C, there are six obsessive strategies for protecting the self – by focusing intensively on the self (Bowlby, 1973). All are characterized by displays of intense negative affect and an absence of causal clarity. Individuals using the obsessive Type C strategies draw others too close or dismiss them altogether. They are consumed by a single perspective and unaware of their conflicting feelings. Sensory images are intense and, together with recalled episodes, are central to identifying the individuals' reasons for feeling so bad. Semantically, these individuals blame, derogate, misattribute causality, and deceive when necessary. They may also rationalize or skillfully mislead others. Their strategies are paired opposites that range from aggressive-and-feigned helpless (C3–4) to punitive-and-seductive (C5–6) and menacing-and-paranoid (C7–8).

In addition, the DMM identifies a number of ways in which self-protective strategies are rendered non-strategic. One is activation of responses or feelings tied to unresolved trauma or loss; the other is «modifiers» of strategies. Because lack of resolution is not relevant to our case, it will not be discussed further. In the DMM, «modifiers» refer to ways in which otherwise strategic behavior can be rendered non-strategic, i.e., failing to fulfill the protective function of strategy. In most (and possibly all) cases, these states occur when there is no evidence of current danger (except sometimes self-generated dangers such as cutting, suicide, or risk-taking behavior). That is, the individual «knows» with certainty (albeit inaccurately) that there is danger and tries to organize around it, but the organization necessarily fails – in one of three ways.

The three modifiers are depressed, disoriented, and intrusions of forbidden negative affect; each fails in a different manner. («Depressed» as used in the DMM refers to specific markers found in specific assessments of attachment. It does not refer to a diagnosis of depression and may – or may not – correspond to such a diagnosis.) A strategy is considered to be in a «depressed» state when (1) the markers for a particular ABC strategy are present during the assessment, (2) they do not protect the individual from threat (during the assessment) because the individual does not react with strategic arousal to more threatening events or more probing questions, (3) there are signs, within the assessment, of lowered arousal (e.g., sighs, long pauses, statements of the futility of strategic action), in spite of increasingly stressful events or questions.

A strategy is deemed to be in a «disoriented» state when (1) the markers for a particular ABC strategy are present during the assessment, but (2) they do not function to protect the individual, who demonstrates, during the assessment, both (3) continuous high arousal (e.g., agitated activity, stuttering, such rapid speech that it is incomprehensible) and (4) uncertainty regarding the source of the threat or danger or, conversely, the target to which the self-protective behavior should be directed. In response, (5) the individual seeks orientation from the interviewer. Put another way, disoriented individuals do not recognize either when there is no threat or, on the presumption of threat, when or where the threat might be. Neither do they know what to do in response to this unspecified threat. Depression and disorientation, as used by the DMM, reflect the opposite conditions of unvarying low arousal and unvarying high arousal, combined with certainty and uncertainty regarding the nature of the danger – as

perceived by the individual (i.e., the certainty or uncertainty could be inaccurate, but the individual does not perceive that). In the case of depression, no help is sought; in the case of disorientation, the individual seeks help in retaining focus and verifying that they are understood.

Intrusions of forbidden negative affect occur only in compulsive Type A strategies (where display of negative affect is forbidden) and are displayed as unregulated bursts of intensely negative behavior (e.g., sudden cursing in a controlled, polite speaker, sudden threatening gestures that are not then disarmed). The effect of the intrusions is to undo the compulsive strategy and to raise arousal dramatically.

## **Assessing Attachment**

There is a lack of studies that test attachment-based hypotheses against other explanatory models for particular problems, including ADHD. One reason for the lack of ADHD studies may be the lack of assessments of attachment for middle childhood that discriminate among risk children. Although most children referred for ADHD evaluation are between six and twelve years old, there have been few assessments of attachment developed (and none accepted by the research community) for this age span (Green & Goldwyn, 2002). School-age children have outgrown the Strange Situation procedure (Ainsworth, Blehar, Waters, & Wall, 1978), but lack the maturity for reflective narrative assessments. Although several assessments of attachment have been proposed for the school years, only the School-age Assessment of Attachment (SAA, Crittenden, 1997–2005) combines (a) the principles of the DMM theory with (b) the developmental characteristics of 6–12-year-old children to yield (c) an array of risk classifications with the potential to discriminate among children with different disorders. Because the SAA is very recently developed, there are no group studies using it yet.

For this case, we assessed the attachment strategies of a boy referred for ADHD assessment and his mother. Although we expected that their attachment patterns would be among the new DMM patterns, we were unsure whether they would be strategic or not.

## **Method**

### **Subjects and Procedure**

Benjamin, a ten-year-old boy diagnosed with ADHD, and his mother were selected because they represent a typical referral. Both Benjamin and his mother agreed to assessment and to presentation of the results as a published case; in doing so we have changed crucial details to anonymise the case. Benjamin's mother is an educated nursery teacher in her early thirties. The family's life was unstable from the beginning with Benjamin's father being an itinerant worker who used cannabis. Benjamin's mother thinks Benjamin reacted to this and said that he has always been a daddy's boy.



Benjamin was born four weeks premature; a Caesarean-section was performed. According to his mother, Benjamin has always been active, clumsy, and impulsive; indeed, she first sought help from the educational psychological service when Benjamin was only four years old. At that time, his brother was just born, and Benjamin had had an operation for a minor hernia. In addition, there was marital discord, including violence, between Benjamin's parents. His mother described it this way: «[Benjamin] has seen and heard much that is strange and he is told two different versions of what happened.» After extensive observation and formal assessment, by the educational psychological service, it was concluded that Benjamin's activity level was normal for a four-year-old.

Benjamin's parents were divorced when he was seven. It was a difficult break-up, and Benjamin himself says that he still thinks about it a lot. Benjamin now lives with his mother, her new partner and a younger brother. Although initially they disagreed about childrearing, that has gotten better.

At eight years of age, Benjamin struggles socially and has been bullied at school. Even though he has normal intelligence, he cannot concentrate in school, easily becomes distracted, and gives up before completing tasks. Consequently, he was referred to a child and youth psychiatric out-patient clinic by the psychological service, with the concurrence of the general practitioner, to determine whether his difficulties could be due to ADHD. After a full differential diagnostic evaluation, a diagnosis of ADHD was given, and Benjamin is now taking psychostimulant medication.

Initially, Benjamin's mother did not agree with the ADHD diagnosis. Instead, she thought Benjamin had emotional difficulties due to his parents' violent relationship. She still has frequent conflict with her ex-husband and finds it difficult to handle Benjamin.

### **Assessments of Attachment**

Two assessments of attachment were used: the AAI for Benjamin's mother and the SAA for Benjamin. Both were analyzed and interpreted using the DMM discourse analysis and outcome classifications.

*Adult Attachment Interview (AAI).* The AAI (George, Kaplan, & Main, 1986) was used, in a modified form intended to better address the experiences of troubled adults (Norwegian translation of Crittenden's modification by Sarfi & Søvik, 1997), to assess Benjamin's mother's pattern of attachment. The AAI is a semi-structured, one to one and a half hour-long interview that is recorded and transcribed verbatim. The discourse, and not the content of the answers to the questions, is crucial. The interview consists of a series of questions about childhood relationships with attachment figures; these are expanded with interviewer-generated follow-up questions. Over the course of the interview, the topics become increasingly threatening in order to elicit the individual's self-protective strategy. Beginning comfortably, the questions become a bit more challenging, then minor and later substantial threats, including loss of

attachment figures, are introduced. Before closing, several integrative questions are asked.

What characterizes Crittenden's modification is a broader array of dangers, probes of more memory systems (procedural, imaged, semantic, connotative language, episodes, and reflective integration, Schacter & Tulving, 1994), and in the closing, returning control of the interview to the speaker. After transcription, the discourse is annotated and clustered to generate self-protective strategies as represented in each memory system. The concordance among these representations is considered for coherence and content. The resulting classification can consist of as many as three parts:

1. self-protective strategy from B1–5, A1–8, and C1–8 (including A/C combinations),
2. lack of resolution of loss or trauma (or both),
3. modifiers that render the self-protective strategy ineffective.

There is an extensive body of literature supporting the reliability and validity of the 3-classification (ABC) distinctions of the Main and Goldwyn AAI and an emerging body of literature on the DMM expansion (adolescents: Black, Jaeger, McCartney, & Crittenden, 2000; anxiety disorders: Hughes, Kendrick, & Hardy, 2000; avoidant personality disorder: Rindal, 2000; eating disorders: Ringer & Crittenden, under review, Zachrisson, 2004; factitious illness by proxy: Kozłowska, Foley, & Crittenden, 2006; maltreating mothers: Seefeldt, 1997; PTSD: Crittenden & Heller, under review; sexual abuse: Haapasalo, Puupponen, & Crittenden, 1999; treatment outcome: Gullestad, 2003).

*The School-age Assessment of Attachment (SAA)*. The SAA was used to elicit the child's representations of the relationship between himself and attachment figures, together with his self-protective strategy when faced with threat or danger (Crittenden, 1997–2005). The SAA consists of seven picture cards to which the child is asked to tell, first, an imaginary story and, then, his/her own story of a recalled experience. Finally, the child is asked what he/she would do if something similar happened to him/her in the future. The SAA uses a discourse analysis in which procedural, imagined, semantic, connotative, episodic and integrative representations of relationships are compared. This makes it necessary to insure, through follow-up questions, that these representations are either present in the child's responses or have been actively excluded. The interview is recorded and transcribed verbatim.

The first picture shows a boy leaving the house waving to his mother who stands in the door. It says «The boy goes out alone». This card, where there is no danger, functions to establish rapport and the procedure for responding. It is followed by cards showing progressively more danger and greater need for attachment figures for protection and comfort, including cards about moving house, rejection by peers, bullying, father leaving, and running away. The last card is «The boy's mother is going to hospital». The interviewer's role is to function as a surrogate attachment figure, giving the child the confidence to think and talk about threatening material. Follow-up questions are used when the narratives do not contain the critical elements for analysis. These elements

address (a) the temporal order of events, (b) feelings, (c) theory of mind, and (d) an integrative application of the experience in the future, (e.g., What would you do if this happened again?). The resulting classification has the same three components as in the AAI.

Both the AAI and SAA transcripts were classified by Crittenden, who knew nothing about the dyad, not even that they were mother and son. They were later discussed in an advanced clinical attachment seminar in Oslo.

## **Results**

Benjamin's mother's assessment is presented first both because she creates much of the psychological context in which Benjamin developed, i.e., she may affect Benjamin's behavior causally, and because the AAI is generally familiar to professionals whereas the SAA is not.

### **Adult Attachment Interview**

Benjamin's mother was classified DO AC+, i.e., disoriented with both a compulsive Type A strategy and an obsessive Type C strategy. Because of the confusions and variations in her discourse, no specific subpatterns could be designated. To the contrary, there was evidence of bits and pieces of several patterns, all used non-strategically. Most telling, Benjamin's mother seemed very confused and mixed together many perspectives from different sources. Confusion of source memory (i.e., not knowing what the source of information is and, therefore, not knowing to whom it is relevant or when – past or present – it is relevant) is the defining feature of the «disoriented» modifier.

As regards the history, it appears that Benjamin's mother grew up with her mother and father and a two-year younger brother. The family moved a lot. She says that her parents were not very comforting, and her episodes indicate that they weren't protective either, for example, she reported wandering alone in Oslo as a 3–4 year old. Her father seems to have ruled the family, being quite firm and wanting her to perform scholastically. There also seems to have been a period of rebellion, where she had partners that her parents didn't like (including her drug abusing ex-husband), but now, in adulthood, she exonerates and idealizes her parents.

The discourse analysis indicated that her semantic memory was characterized by Type C (preoccupied) discourse markers whereas her episodic memory was Type A (dismissing). It appeared as if she had been told that good things had happened, although she herself recalled negative experiences. Her confusion was most evident when she both requested reorientation from the interviewer and also tried to reorient herself through self-talk. Her story was incoherent with lack of connection between different parts of the interview. There was, however, no evidence of unresolved loss or trauma. It should be emphasized that superficially, Benjamin's mother spoke like a normal and caring mother. It was only when her transcribed discourse was analyzed very carefully that the absence of a coherent perspective became apparent.

## **School-age Assessment of Attachment**

Benjamin's SAA was classified DO Utr(ds)Mother A+(8)C5. In common language, this means that Benjamin was disoriented with a dismissed lack of resolution regarding spousal trauma to his mother, in a context of a mixed compulsive Type A and obsessive C strategy that contained developmentally incomplete elements of both an externally assembled self (A8) and also a wished-for angry and self-sufficient self (C5). The mere complexity of this statement suggests the confusion with which Benjamin tried to cope. A8 is characterized by borrowed discourse (e.g., hypothetical statements, minimization of affect, distancing language), borrowed semantic memory and borrowed episodic memory. That is, Benjamin did not have a perspective of his own in speech, thoughts, or episodic recall; all of these were borrowed from adults, usually his mother. At the same time, like a Type C5 speaker, he dismissed others' perspectives and told episodes almost devoid of attachment figures. Neither, however, was he present in his sentences (i.e., he omitted pronouns referring to himself). The episodes themselves frequently described deceit, but in an open manner. In other words, Benjamin did not try to deceive the interviewer (for example, he described his own bad' behavior openly). Further, in the bullying episodes, Benjamin's language was unclear regarding whether he was bullied or the bully, whether he wielded the knife or feared the knife. His images were sometimes somatic, both arousing (Type C) and unconnected to any person (Type A), frequently about stomach pain and sometimes descriptive of mangled objects (like bicycles) that evoked fear – but only in manner that is displaced from himself (possible unresolved trauma). The frequently mentioned non-specific feelings of sadness and worrying did not describe Benjamin himself, but were, instead, attributed to his mother. Although Benjamin did not describe his feelings verbally, his voice varied dramatically from a tiny child-like voice to emphatic, emotional, and questioning. In addition, he sniffed, coughed and exhaled loudly repeatedly, all of which indicated high arousal (Type C). On the other hand, he combined idealization and positive wrap-ups (Type A) with confusing discourse that erroneously connected unconnected events (Type C). The last of these indicated that Benjamin did not understand accurately the causal relations that affected his life. Instead, he largely duplicated his mother's story. Nevertheless he made substantial logical errors and had difficulty keeping to the topic. In the end, we cannot tell whose perspective was being taken, i.e., Benjamin was disoriented. Indeed, the most frequently repeated phrase in his transcript is the intruded «Get it?» (ikke sant), which occurred ten times referencing his own just spoken words, suggesting that Benjamin himself was unsure whether his words had meaning.

## **Discussion**

The aims of this case study were to identify the attachment patterns of a child diagnosed with ADHD and of his mother and to consider their relevance to ADHD. According to Ladnier and Massanari (2000), children with ADHD typically have grown up in families that share three debilitating characteristics: (1) the absence of a healthy relationship between two caring adults; (2) a pattern of exposure to yelling, criticism,

sarcasm, and violence; and (3) parenting that lacked respect, discipline, structure and consistency.

All of this was true for Benjamin. We expected that such early experiences could lead to a self-protective strategy characterized by (1) heightened arousal, (2) quick response (i.e., impulsivity), and (3) intense, protection-motivating feelings (i.e., inability to modulate emotions). In some cases, these might function to increase the predictable and protective response of parents, thereby, being atypical, but adaptive. In other cases, they might not change parental behavior, and the child's escalating behavior would be both atypical and also maladaptive.

This was the situation for Benjamin and his mother. Based on their SAA and AAI data, it appeared that Benjamin and his mother were similarly disoriented, but her disorientation was tied to her childhood whereas Benjamin's was tied to her, including specifically her marital trauma. We think that Benjamin's mother's anxiety prevented her from being consistently protective and comforting. This probably caused Benjamin to become anxious, behaving in symptomatic ways which, in turn, further upset his mother. Neither Benjamin nor his mother could disentangle this cycle of anxious arousal, nor could they accurately attribute feelings and actions to their proper sources.

Important aspects of this interpretation are that Benjamin experienced no direct traumas, and his mother tried her best to care for him. Nevertheless her arousal affected him, and together they created a dyadic system of escalating distress and increasing confusion regarding its cause.

### **Disorientation and Attentional Problems**

Confusion about the sources of information is the defining feature of disorientation in the DMM. This often results in information from incompatible sources being treated as equally self-relevant in the present. The sources include both the self and others and also present and past perspectives, all conglomerated without indication of personal or temporal specificity. Attachment figures' representations are usually especially prominent, and this is the case with Benjamin. Needless to say, these representations are self-relevant to attachment figures, but inappropriate to the child. In the same way, self-relevant representations generated at different times and for different contexts are all treated as self-relevant in the current context. Put another way, too little is excluded as irrelevant to the self in the present. This results in diffuse, misdirected, and contradictory behavior. In SAAs and AAIs, disorientation can be seen as both disconnection across related parts of the interview and also misconnection of unrelated events and perspectives. That is, individuals both miss relevant causal connections and also find causal connections where there are none. Similarly, there are often self-orienting intrusions (requests for reorientation by the interviewer or self-talk) that the individual seems both unable to control and unable to use.

Attention deficit is the inability to differentiate between relevant and irrelevant stimuli and is crucial to diagnosing ADHD. Children with ADHD easily become distracted, struggle to stay focused, and keep very few things out of awareness. Everything seems

immediately relevant to them. This clearly parallels the description of disoriented attachment. The question becomes whether the notion of non-strategic disorientation in a family context adds to our understanding of ADHD and, if so, whether it offers new approaches to prevention or treatment.

### **Assessment of Attachment in the School Years**

A major roadblock to studying the relation of attachment to ADHD has been the lack of a fine-tuned assessment suitable for 6–12 year old children. The SAA now makes it possible to assess attachment in school-age children, thus permitting exploration of how attachment relationships and interaction with primary caregivers may contribute to the troubling symptoms. Full validation of attachment assessments for school-aged children is sorely needed.

### **Intergenerational Patterning**

Finding a similar attachment pattern in both mother and son was not unexpected. Several studies have confirmed the relation between children's Strange Situation classifications and mothers' attachment as assessed with the Adult Attachment Interview (van IJzendoorn, 1995). This raises the question of whether the Benjamin would have had a disoriented attachment pattern even if there had been no family disruptions.

Whenever mothers appear to contribute to children's developmental problems, there is concern about «blaming mothers.» If one remembers that mothers, too, were once children and, therefore, have their own developmental story, it becomes clear that blame is both inaccurate and harmful. Every parent intends the best for their child. Nevertheless parents may unwittingly and unwillingly contribute to children's problems. Knowing the nature of that contribution is the best way to reduce its negative impact. In addition, this study did not address fathers' contribution, but it is entirely possible that fathers contribute both directly to children's well-being and indirectly, through support or lack thereof of the mother.

### **Implications for Treatment**

Parents of children with ADHD often complain of power struggles and difficult parent-child relationships. Treatment, however, is usually focused on the child. If treatment planning were based on attachment theory, therapists would consider the functioning of all family members. In Benjamin's case, helping his mother to understand and resolve her anxieties, including her relationship with her former husband, might be crucial to establishing a home in which Benjamin felt safe. Other families might benefit from couples' treatment or family therapy or a coordinated series of individual work. Indeed, once Benjamin's mother could function differently, dyadic or individual work with Benjamin might help him to notice and respond to his mother's changes. Until then, medication might help more than psychotherapy. There is, however, in Benjamin's case a particular risk. His partial A8 suggests that he is beginning to rely on

professionals, rather than his mother, to organize his thinking about himself. This is an unfortunate outcome that should be avoided.

These ideas are conjectures, not prescriptions. They are important because they change the focus of treatment from symptom reduction to strategic adaptation and the need for children to feel that their home is safe and comforting. Indeed, parents need this as well, and Benjamin's mother's anxiety seemed to elicit Benjamin's anxiety. To be able to assist their children to change, parents need to understand their own concerns and strategies for coping, i.e., their self-protective attachment patterns, particularly their responses to their own past emotional trauma.

### **Limitations and Future Research**

Case studies are limited to generating hypotheses that can be tested by appropriately controlled group designs. Moreover, having data at only one time period cannot address causation. It might be that biological vulnerability would have brought on the symptoms of ADHD regardless of the bonding break – or the reverse, that biological vulnerability was not necessary in the context of a bonding break and a disoriented attachment figure. Moreover, only prospective, longitudinal studies can test the direction of effects and determine which factors are necessary or even sufficient to cause ADHD. In addition, many children outgrow their ADHD symptoms when they reach adulthood. Longitudinal studies can determine whether those who improve also change attachment pattern, thus making change in strategy a possible explanation for symptom reduction. Another serious limitation to a case study design is that generalization of the results to other dyads can only be tentative.

Our case does, however, suggest directions for future research. Specifically, familial contributions to the development of ADHD should be sought, both in terms of disorientation in mothers and children, but also in terms of other possible anomalous strategies. Certainly there would be no reason to expect that one case study would define the range of familial circumstances associated with ADHD. If cross-sectional studies indicated that environmental influence was supported in a substantive proportion of cases, longitudinal studies should be undertaken. In that case, mothers' attachment organization, prior to the birth of the child, might be used to select a potentially high risk group. In addition, the contribution of fathers should be considered; they could provide the moderating influence that reduced or augmented the risk brought by mothers and children.

Practically, both the SAA and the AAI are expensive and time-consuming assessments to deliver. Further, the procedure used for the childhood years, the SAA, still needs validation and psychometric evaluation. But given the serious consequences of treating a considerable and rising percentage of children with psychostimulant medications, as well as the potential usefulness of attachment-informed intervention, these obstacles may be less daunting than they appear, especially if large-scale replication confirms the findings demonstrated here. In that case, less intensive assessment may prove sufficient to confirm an already expected pattern.

## Conclusion

In this single case, we explored how a particular form of insecure attachment, disorientation, might contribute to the symptoms of ADHD. The study pointed to a pattern in which the mother's disoriented behavior elicited anxiety in her child who, in turn, tried to elicit parental protection and comfort, but did so in ways that confused the mother further. The outcome was a self-maintaining cycle of anxiety and miscommunication.

Although it is generally agreed that constitutional abnormalities are important in ADHD, evidence of specific etiology is still lacking. Instead, ADHD cannot yet be affirmed as a disease and retains its status as a disorder, with the lack of definitive diagnostic and etiological definition that that implies. Research has focused on biological explanations, but the possible importance of psychological/environmental factors in shaping neurological development should not be overlooked as there may be alternative pathways to the same set of symptoms. In particular, inclusion of the DMM approach to attachment suggests that some of the symptoms of ADHD may serve a self-protective function in families where children feel unsafe, but cannot directly discern and organize around a specific danger.

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