HYPNOSIS, ATTACHMENT, AND OXYTOCIN: An Integrative Perspective

Vladimir Zelinka

European Centre for Medical Psychology "PsyPluriel," Brussels, Belgium

Yann Cojan

University of Buenos Aires, Buenos Aires, Argentina

Martin Desseilles

University of Liège, Belgium; and University of Montreal, Canada

Abstract: This article considers links between clinical hypnosis, attachment theory, and oxytocin. First, it proposes that commonalities between clinical hypnosis and attachment theory may improve our understanding of the hypnotherapeutic process. Then, it suggests that an integrative model unifying clinical hypnosis and attachment theory may constitute a link between clinical hypnosis and a neurobiological factor such as oxytocin. Finally, it discusses the implications of these hypotheses for clinical practice and future researches.

Nowadays an abundant scientific literature acknowledges the therapeutic value of clinical hypnosis (for a review, see Barabasz, Olness, Boland, & Kahn, 2010; Michaux, 2007; Spiegel & Spiegel, 2004; Yapko, 2003). However, the reasons for its therapeutic effectiveness are still debated. That ongoing debate involves many fields and explores various theoretical directions (Alladin, 2007; Bioy & Michaux, 2007; Chertok, 2006; Lynn & Rhue, 1991).
The present article suggests that attachment theory provides an interesting perspective on the therapeutic effectiveness of clinical hypnosis and may inform our understanding of its neurobiological correlates.

Because addressing all available information about clinical hypnosis, attachment theory, and oxytocin would exceed the limits of this article, we have chosen to focus on the data we believe are the most relevant to our hypotheses. Moreover, we are aware of the risk of error and misunderstanding when one tries to extrapolate specific concepts beyond the limits of the theoretical framework where they originated. We hope that the reader’s awareness of that issue (inevitable in cross-theoretical reflection) will protect him or her from its misleading impact.

**Attachment Theory**

*Basic Concepts*

Attachment theory is a stream of developmental psychology providing an organized body of knowledge about human development, interindividual relationships, and their impact on health and well-being. Initially conceived to explain emotional and behavioral disorders detected in relationally isolated children (Ainsworth, 1963; Bowlby, 1958), the concepts of attachment theory have been extended to the study of romantic and therapeutic relationships in adulthood (Hazan & Shaver, 1987; Obegi & Berant, 2009a; Shaver & Mikulincer, 2009; Slade, 2008; Wallin, 2007).

The originators of the theory observed that, in time of distress, many infants tend to achieve physical proximity with a “stronger and wiser” other liable to provide care and protection (Ainsworth & Bell, 1970). Most of the time, that role is played by the mother, but that function may also be held by anyone who behaves in a mothering way over a period of time. In that context, the one who provides care is called the caregiver, whereas the one who seeks help and protection is called the care seeker (Bowlby, 1969, 1988; Cassidy, 2008; Mikulincer & Shaver, 2010).

It has also been hypothesized that the motivational potency of that innate need for safety prevails over sexual and alimentary drives of human functioning and has a hierarchical primacy in determining subject’s behavior and thoughts with regard to relationships (Bowlby, 1973; Cassidy, 2008; Harlow, 1958, 1959; Mikulincer & Schaver, 2010). However, because of life circumstances, the care seeker may be confronted with an incompetent caregiver, which may impair the care seeker’s feeling of safety and disrupt his or her later capability to get help (Fonagy, Gergely, & Target, 2008; Mikulincer, Shaver, Cassidy, & Berant, 2009; Weinfield, Sroufe, Egeland, & Carlson, 2008). Hence, it has been proposed that repeated failures in caring processes may weaken
the care seeker’s coping abilities and may lead to individual differences in relational functioning and emotional regulation (e.g., avoidance of relational interactions, difficulties coping with social rejection, overestimation of environmental dangers; Cassidy, 2008).

These individual differences have been classified in four attachment styles: one secure and three insecure. There is a relative consensus regarding the fundamental characteristics of the secure attachment style. However, names and distinctive characteristics of the three insecure styles may vary according to the authors, as well as the instruments devised to examine the relational interactions. The description of these subtle differences would largely exceed the limits of this article. (For a review, the reader may consult Ainsworth, Blehar, Waters, & Wall, 1978; Bartholomew & Horowitz, 1991; Crowell, Fraley, & Shaver, 2008; Hesse, 2008; Main & Salomon, 1986; Mikulincer & Schaver, 2010.)

Although proximity-seeking behaviors are usually more visible in childhood (Ainsworth et al., 1978), researchers in adult attachment noticed similar phenomena in adulthood (Hazan & Shaver, 1987). Drawing upon animal studies and empirical findings, they proposed that proximity with a competent caregiver was instinctively associated with security over a lifetime (Fraley & Shaver, 1998; Harlow, 1958, 1959; Mikulincer & Shaver, 2010; Obegi & Berant, 2009b).

**Attachment and Health**

What matters from a clinical point of view is that secure attachment style has been associated with health and effective emotional regulation (Berlin, Cassidy, & Appleyard, 2008; Schore, 1994; Sroufe, 1997), while insecure attachment has been identified as a risk factor for psychopathologies (Bowlby, 1973, 1988; DeKlyen & Greenberg, 2008; Dozier, Stovall-McClough, & Albus, 2008; Thompson, 2008). In addition, secure attachment style has been associated with greater trust during relational interactions (Mikulincer & Shaver, 2010) and increased therapeutic compliance (Cortina, 1999; Mikulincer et al., 2009), which are known to favor therapeutic success (Gelso & Carter, 1985; Horvath & Greenberg, 1994; Orlinsky, Ronnestad, & Willutski, 2004).

It has also been hypothesized that confident expectation of adequate care in times of need permits securely attached individuals to take risks and to try new alternatives to solve problems, believing that competent help will be provided if needed (Bowlby, 1988; Mikulincer & Shaver, 2010). Consequently, securely attached individuals may be more likely to explore new aspects of their inner world and to disclose difficult feelings in therapy (Obegi & Berant, 2009b), knowing that relief is possible in the case that an unacceptable distress would occur (Wallin, 2007).

Furthermore, it has been proposed that a secure attachment may lead to a biochemical and neurological environment favoring optimal autonomic regulation and immunological functioning (Cozolino, 2010;
Insecure attachment styles, on the other hand, would correlate with a higher frequency of physical and emotional illness and have been proposed as unspecific risk factors in diverse relational disorders and stress-related psychopathologies (Bowlby, 1958; DeKlyen & Greenberg, 2008; Dozier et al., 2008; Thompson, 2008).

Attachment style classification, however, is neither a diagnostic tool nor a psychopathologic classification (Berlin et al., 2008; Bowlby, 1969; Mikulincer & Shaver, 2010). It may predict care seeker’s vulnerability in the face of negative life events, but there is no evidence that attachment style in infancy necessarily determines emotions and behavior in adult life. Indeed, clinical observations indicate that relational experiences and life events may have a modulating effect on attachment styles during one’s lifespan (Magai, 2008; van IJzendoorn & Sagi-Schwartz, 2008).

Finally, due to its connections with health and well-being, attachment theory has been applied to the field of medical care. In that context, a patient may be compared to a care seeker looking for adequate care, while a therapist may be compared to a caregiver whose behaviors are liable to satisfy the care seeker’s demands for help and relief (Bowlby, 1988; Slade, 2008; Wallin, 2007). From that point of view, a therapist displaying the characteristics of a secure caregiver may favor the development of a patient’s secure attachment style, eliciting the associated beneficial consequences, not only during the therapeutic session but also beyond it, through the long-lasting neurobiological changes that it presumably generates (Bowlby, 1988; Slade, 2008; Wallin, 2007).

**Integrative Perspective**

Since secure attachment is known to favor health and well-being, hypnotic suggestions that favor secure attachment could play an important role in therapy.

**Wording suggestions and attachment behavior.** Our review of the literature indicates that one of the links unifying clinical hypnosis and attachment theory is the peculiar nature of the hypnotic communication.

It is well known that wording hypnotic suggestions within the frame of a therapeutic context involves reciprocal exchanges of information and requires an interaction between a sender and a receiver (Salem & Bonvin, 2004). Moreover, it is usually accepted that when there is communication, there is interaction; and when there is interaction, a relationship may be developed between the interacting individuals (Watzlawick, Helmick Beavin, & Jackson, 1972).

The relationship that stems from the use of hypnotic suggestions has already been documented by several authors (for a review, see Diamond, 1987; also, Banyai, 1998; Bioy & Keller, 2009), and the nature
of its different characteristics has been examined from the standpoint of various psychotherapeutic schools (for a review, see Biy & Michaux, 2007; Nash & Barnier, 2008). Over time, that issue has been theorized in terms of transference and object relations (Brown & Fromm, 1986; Smith, 1981), working alliance and empathy (Palaci, 1993; Petot, 2006); motivation and social influence (Kihlstrom, 1985; Orne, 1966; Spanos, 1982), regression and symbiosis (Frauman, Lynn, Hardaway, & Molteni, 1984; Lutz & Fix, 2007) to name just a few.

In our opinion, attachment theory may also provide an interesting point of view on the relational interactions resulting from the use of hypnotic suggestion and may shed a supplementary light on the hypnotherapeutic process. Indeed, several authors have proposed that the quality of communication may influence relationship intimacy (Florsheim & McArthur, 2009; Halfon, 2007; Teyber, 2006) and may confer security to the therapeutic interaction (Balken, 2004; Wallin, 2007). According to Banyai (1998), for example, “characteristic hypnosis styles resemble the styles of the most important relationships in life that have regulatory functions” (pp. 58–59). Interestingly, from the perspective of attachment theory, the most important relationships in life are those developed in times of need, between a care seeker and his or her caregiver (Bowlby, 1969, 1988; Johnson, 2009; Mikulincer & Shaver, 2010; Schaffer, 2007).

However, according to attachment theory, not all forms of human interaction lead to a secure attachment. In order to build a secure attachment, a caregiver should respond to a care seeker’s demands in an attentive, responsive, sensitive, available, and benevolent manner over a sufficient period of time (Ainsworth et al., 1978; Berlin et al., 2008; Bowlby, 1988; Cassidy, 2008; Mikulincer & Shaver, 2010).

Drawing upon these elements, we propose that wording hypnotic suggestions in accordance with the utilization approach may fulfill the relational characteristics that favor secure attachment and may lead to the associated beneficial consequences for health and well-being. Indeed, pronouncing suggestions based on utilization principles may convey a nonverbal meaning parallel to, but different from, the verbal one. That nonverbal meaning may depend on the structure of the hypnotic suggestions and may have an implicit relational impact independent of the explicit semantic content of the pronounced words.

In fact, it has been proposed that hypnotic suggestions may simultaneously communicate several meanings processed separately at different neurocognitive levels loosely divided into conscious and unconscious (Hilgard, 1974; Watzlawick, 1978; Watzlawick et al., 1972). It is therefore possible that a therapist’s verbal behavior may have a nonverbal meaning transmitted simultaneously as the verbal one but with different implications.
Let us take an example. When pronouncing the sentence “I’m not talking right now!,” the speaker conveys simultaneously several messages. One of them is conveyed by the meaning of words and the other by the behavior of the speaker. In our example, what is done contradicts what is said in order to illustrate the fact that the meaning conveyed by the act of speaking may be different from the meaning conveyed by the words constituting the speech.

In a similar way, several types of hypnotic suggestions may simultaneously convey verbal information about the patient’s hypnotic experience (e.g., bodily sensations, visualized events) and nonverbal information about the therapist’s state of mind with regards to the relational interaction (e.g., attentive, responsive, benevolent).

Indeed, a therapist applying the utilization approach notices, comments, accepts and uses whatever may arise from the patient in order to elicit, to maintain, and to guide the patient’s hypnotic experience. It’s a continuous adaptation to the patient’s subjectivity (Erickson, 1959; Erickson & Rossi, 1979; Rossi, 1980). By doing so, the therapist shows that he or she notices even the slightest, spontaneous, and unforeseeable patient reactions that were not sometimes perceived by the patient him or herself before being pointed out by the therapist.

In addition, the adequate use of the utilization approach requires a focus not only on the part of the patient but also on the part of the therapist (Hammond, 1990a). Indeed, during a hypnotic session including the utilization technique, while the patient focuses on his or her experience, the therapist focuses on the patient. Most of all, the therapist makes his or her attentiveness apparent by noticing and commenting out loud whatever may arise during the hypnotic session so as to guide the patient’s hypnotic experience toward a therapeutic change. As a result, the patient may conclude more or less implicitly that the therapist is attentive, responsive, sensitive, and available, since he or she behaves that way. Furthermore, since the relational interaction occurs in a therapeutic context, the therapist may a priori appear as benevolent.

Moreover, since the therapist’s attentive and benevolent comments on a patient’s ongoing experience are the essential ingredients of many hypnotic suggestions, implicit facilitators of secure attachment may be retrieved within the structure of various hypnotic strategies such as signaling, pacing and leading, ratification, body scan, and many others (Hammond, 1990a).

Therefore, many suggestions destined to elicit, to maintain, and to use hypnotic experience may simultaneously contribute to the construction of a secure attachment relationship by conferring on the therapist the behavioral characteristics of a secure caregiver. That may have a modulatory effect on the quality of the experienced care, the level of the patient’s sense of safety, as well as his or her health and well-being.
Hypnotic metaphors and attachment themes. In our opinion, not only the structure but also the content of hypnotic suggestions may constitute a link between clinical hypnosis and attachment theory. Indeed, different types of hypnotic metaphors seem built with the themes and concepts belonging to the theoretical framework of attachment theory.

For example, terms referring more or less explicitly to a “safe haven” or a “protective caregiver” abound within hypnotic scripts as well as attachment theory handbooks (Cassidy & Shaver, 2008; Erickson & Rossi, 1980; Hammond, 1990b; Kluft, 1990; Salem & Bonvin, 2004; Virot & Bernard, 2010). Habitually, these concepts refer to symbolic places (e.g., safe place) or imaginary personages (e.g., February man) supposed to provide comfort, protection, and help in order to facilitate patient’s therapeutic change.

Moreover, since several attachment researchers have suggested that anxiety may be partly relieved by mental representations of symbolic sources of protection (Granqvist & Kirkpatrick, 2008; Mikulincer & Shaver, 2010), and since certain hypnosis scholars consider that a patient’s unconscious mind may be seen as an inner ally and protective immaterial entity (Comstock, 1991; Melchior, 1998), it may be proposed that the metaphor of the benevolent unconscious mind, developed by Erickson (1983; Rossi, 1980; Yapko, 2003), may be compared to a symbolic caregiver and may have similar beneficial effects on the patient.

Indeed, when the patient’s unconscious mind is presented by the therapist as the main agent of the patient’s automatic behaviors, physiological responses, and therapeutic outcomes, it may be perceived as a “stronger and wiser” other, dissociated from the patient’s self and able to accomplish what is unfeasible for the therapist’s or patient’s willpower. Usually, that suggestion is proposed to the patient in an indirect way and consists of portraying the unconscious mind as an intermediary between the patient and the patient’s untapped positive resources to which the unconscious mind is supposed to give access. In addition, the human characteristics regularly attributed to the unconscious mind (e.g., “your unconscious mind listens, knows, helps to,”) favor personification (Melchior, 1998) and may elicit the feeling of reciprocal interaction that is necessary for the development of an attachment relationship. Moreover, suggesting that a patient’s experience of relaxation, comfort, and relief are facilitated by the unconscious mind may make it appear as benevolent.

Hence, the patient may develop an attachment relationship not only with the therapist but also with his or her own unconscious mind perceived more or less explicitly as an inner caregiver. That symbolic relationship may be an important ingredient of the therapeutic effect
of clinical hypnosis and may constitute the relational dimension of self-hypnosis.

In sum, visualizing secure attachment figures, imagining a comfortable safe haven, and perceiving the actions of a symbolic caregiver such as the benevolent unconscious mind seem to be the components of many hypnotic methods (Hammond, 1990b; Rossi, 1980). Therefore, attachment themes might be naturally present at the core of various hypnotic suggestions.

**Hypnotic experience and experience of attachment.** Another link connecting clinical hypnosis to attachment theory may be the resemblance between the peculiar nature of the hypnotic experience and the peculiar nature of the experience of attachment.

Attachment theory assumes that attachment mechanisms are innate and potentially active since the earliest moments of life (Bowlby, 1988; Mikulincer & Shaver, 2010). Consequently, the first relational interactions shaping an individual’s attachment style occur during an infant’s preverbal period and have a nonverbal form. In addition, it has been suggested that the first relational interactions are the most influential in the development of an infant’s secure attachment style (Berlin et al., 2008; Thompson, 2008; Wallin, 2007), even though it may vary during his or her lifespan in response to significant life events and relational circumstances (Bowlby, 1988; Magai, 2008).

As a result, hypnotic suggestions that resemble the nonverbal interactions that promote secure attachment in infancy could also promote secure attachment in adulthood.

The role of attachment mechanisms in the field of clinical hypnosis has already been addressed by several authors (Bioy, Wood, & Célestiné-Lhopiteau, 2010; Colombo, 2007; Michaux, 2007). Their hypotheses refer to the beneficial effect of what might be called a “corrective relational experience.” It consists of a patient’s therapeutic change through the beneficial effects of a secure relationship. From the perspective of attachment theory, it means that when a therapist fulfills the characteristics of a secure caregiver, the patient may have a relational experience that is healing in its own right.

Drawing upon these elements, we propose that hypnotic suggestions conferring a secure quality to the nonverbal meaning of the therapist’s verbal communication may generate a relational experience similar to the one that should have been experienced during infancy in order to build a secure attachment style. As we have seen, the secure quality of therapist’s communication may stem from the use of hypnotic suggestions based on the utilization approach (e.g., pacing and leading, ratification, signaling). Hence, detailed descriptions and accepting comments of a patient’s ongoing hypnotic experience may be instinctively perceived as a competent caring attitude and may facilitate the experience of a secure attachment.
Furthermore, during a hypnotic experience, time proximity and coexistence between the therapist’s words and patient’s corresponding perceptions may create the belief that several aspects of the patient’s internal experience are elicited by the therapist, as if he or she was a part of the patient’s inner world (Diamond, 1987). That sense of connectedness and intimacy seems similar to the one resulting from the relational attunement experienced with the primary caregiver during infancy and may contribute to the mental incorporation of the caregiver’s symbolic representation (Baker, 1982; Banyai, 1998; Diamond, 1987). That process is called symbiotic or fusional alliance and has been proposed to explain several effects observed during the hypnotic experience, such as coregulation of emotions, external regulation of internal process, and coconstruction of meaning (Balken, 2004; Banyai, 1998; Diamond, 1987, 1988; Fogel, 1993; Lutz & Fix, 2007).

Overlapping theoretical framework and conceptual similarities. Finally, one of the most visible points of contact between clinical hypnosis and attachment theory is their overlapping theoretical framework. For example, both clinical hypnosis and attachment theory refer to several concepts of humanistic psychology, such as the unconditional positive regard, the nonpathologizing view of individuals, and the subject-centered attitude in therapy (Bioy & Michaux, 2007; Lynn, Barnes, Deming, & Accardi, 2010; Mikulincer & Shaver, 2010; Megglé, 2002; Rogers, 1942, 1966). Moreover, both fields insist on the critical importance of affective attunement, mirroring, and tailoring in the construction of adequate relational contexts (Ainsworth et al., 1978; Halfon, 2007; Spiegel & Spiegel, 2004; Wallin, 2007).

In addition, Bowlby, Rogers, and Erickson believed in an innate tendency propelling people toward health and improvement (Johnson, 2009; Rossi, 1980). They also had complementary views on people’s need for safety and acceptance, encouraging exploration and human development (Bioy & Keller, 2009; Johnson, 2009). Furthermore, concepts of empathy and a holding environment may have much in common with the concepts of the secure base developed by Bowlby, as well as the utilization approach advocated by Erickson (Bowlby, 1988; Diamond, 1987, 1988; Florsheim & McArthur, 2009; Kohut, 1959; Winnicott, 1971).

Not to mention the psychoanalytic and cognitive-behavioral influences on the theoretical development of both fields (Collot, 2007; Fonagy et al., 2008; Mikulincer & Shaver, 2010; Palaci, 1991; Thioly, 2007).

Clinical Hypnosis and Oxytocin

Data indicate that hypnotic suggestions may have biological (LaBaw, 1992; Torem, 2007; Wood, Bughi, Morrison, Tanavoli, & Zadeh, 2003)
and physiological (Cralsilneck & Hall, 1959; Hoareau, 1992; Wilkinson, 1981) impacts. However, as far as we know, no biological mediator of clinical hypnosis has yet been clearly identified. In our opinion, the links between clinical hypnosis and attachment theory may shed a supplementary light on that issue and may provide a theoretical basis for its empirical exploration.

**Oxytocin as a Neurobiological Mediator of Clinical Hypnosis**

Oxytocin (OT) is a hormone and neuropeptide synthetized in the pituitary gland, mainly known for its role in animal and human pair-bonding, recognition of nonverbal social stimuli, psychological well-being, and mothering behaviors (for a review, see Ishak, Kahloun, & Fakhry, 2010; Scantamburlo, Ansseau, Geenen, & Legros, 2009; Tom & Assinder, 2010).

Since hypnotic suggestions may involve attachment mechanisms (see above) and since attachment mechanisms are known for being modulated by OT (Buchheim et al., 2009; Carter, 2005; Feldman, Weller, Zagoory-Sharo, & Levin, 2007), it seems natural to examine the relationship between the therapeutic use of hypnotic suggestions and the biological effects of OT.

Several authors have already evoked the idea that OT may play a role in the hypnotic process (Legros, 2002; Uvnäs-Moberg, 1998). In addition, the modulatory effect of exogenous OT on hypnotizability has recently been demonstrated (Bryant, Hung, Guastella, & Mitchell, 2012). These clues suggest that OT may influence the mechanisms responsible for the therapeutic effects of clinical hypnosis.

Drawing upon these elements, we propose that hypnotic suggestions promoting attachment may have a modulatory effect on the endogenous level of OT and may contribute to several therapeutic outcomes observed in the context of clinical hypnosis. We do not suggest that OT is the unique explanation for the therapeutic effects of clinical hypnosis, but we do propose that it may be one of the mediators connecting the language of the therapist and the body of the patient.

**Commonalities and Points of Contact**

Our review of the literature suggests that the bio-psychosocial effects of OT share several aspects with the bio-psychosocial effects attributed to clinical hypnosis. For example, hypnotic suggestions as well as OT may influence the quality of relational interactions (Banyai, 1985; Ditzen et al., 2009), the level of trust (Alladin, 2007; Kosfeld, Heinrichs, Zak, Fischbacher, & Fehr, 2005), and the strength of collaborative alliances (Esch & Stefano, 2005a, 2005b; Ratner, Gross, Casas, & Castells, 1990). In addition, clinical hypnosis and OT are thought to have an effect on pregnancy (Halfon, 2007; Russell, Leng, & Douglas, 2003), pain
threshold (Gimpl & Fahrenholz, 2001; Montgomery, DuHamel, & Redd, 2000), inflammatory reactions (Hoareau, 1992; Petersson, Lundeberg, Sohlström, Wiberg, & Uvnäs-Moberg, 1998), and immunology (Geenen et al., 2000; Wood et al., 2003). Both may have an impact on physiological parameters (Hoareau, 1992; Ishak et al., 2010; Petersson, Alster, Lundeberg, & Uvnäs-Moberg, 1996), sexual issues (Burri, Heinrichs, Schedlowski, & Kruger, 2008; Hall, 1978), and memory (Guastella, Mitchell, & Mathews, 2008; Weitzenhoffer, 2000). Finally, both have shown a modulatory effect on depression (Scantamburlo, Pitchot, Ansseau, & Legros, 2008; Yapko, 2006), anxiety (Bartz & Hollander, 2006; Spiegel & Spiegel, 2004), as well as stress-related diseases (Spiegel & Spiegel, 2004; Uvnäs-Moberg & Petersson, 2005).

Another link between OT and clinical hypnosis may be deduced from animal studies. Animal models have shown that the level of maternal attention (e.g., grooming and petting behavior) may influence an offspring’s later ability to cope with stressful events and may partly modify genes responsible for emotional regulation (Fox & Hane, 2008; Meaney, 2004; Meaney & Szyf, 2005; Szyf, McGowan, & Meaney, 2008; Weaver, Meaney, & Szyf, 2006; Weaver et al., 2007). That early mothering attitude has been associated with modifications in offspring’s neurobiological environment, including changes in OT receptors (Cozolino, 2006, 2010; Neumann, 2008).

As we have seen, from the perspective of attachment theory, the wording of certain types of hypnotic suggestions may be compared to secure mothering behavior. Consequently, it may have a comparable impact on stress modulation, gene expression, and the endogenous level of OT. To put it differently, in the context of clinical hypnosis, wording is petting and may generate similar beneficial consequences.

Interestingly, it has already been proposed that hypnosis may have a modulatory impact on stress management (Spiegel & Spiegel, 2004), gene expression (Rossi, 1986, 2005), as well as OT regulation (Uvnäs-Moberg, 1998).

Moreover, OT release is known to become conditioned to all kinds of social interactions and mental imagery (Cozolino, 2006; Dunbar, 2008; Uvnäs-Moberg, 1997). Since social interactions and mental imagery play an important role in the hypnotic process, hypnotic process based on the visualization of secure relational interactions may modulate endogenous levels of OT. However, mere resemblance between the effects of two distinctive elements is not proof of their causal relationship. Several explanations may be offered for the commonalities that we have exposed. For example, hidden intermediaries may be responsible for the shared aspects and may constitute the actual causal factor explaining their common effects. Furthermore, clinical hypnosis is so heteroclite that it is improbable that one biological mediator could explain its various neurobiological effects. Nevertheless, we believe that links between
clinical hypnosis and OT may further the ongoing reflection about the neurobiological mediators involved in the hypnotherapeutic process.

## Discussion and Further Perspectives

Communication and relationship are not only the essential components of clinical hypnosis but also the central element of many psychotherapeutic techniques (Gaylin, 2001; Hubble, Duncan, & Miller, 1999; Messer & Wampold, 2002). Because of that, our hypotheses about attachment and hypnotic suggestions may be extended to several other psychotherapeutic techniques as long as they respect the general principles that have been described.

Furthermore, most of the ideas proposed in this article are purely speculative, meant to encourage reflection about the clinical use of hypnotic suggestions, and remain to be addressed by critical minds and empirical works.

For example, examining a statistical correlation between subjects’ attachment style and their degree of hypnotizability may inform our understanding of attachment theory as well as clinical hypnosis. More precisely, cross-checking data belonging to the Adult Attachment Interview (George, Kaplan, & Main, 1996) and the Stanford Hypnotic Susceptibility Scale (Weitzenhoffer & Hilgard, 1962) may provide supplementary information about individual differences with regard to hypnosis.

From a biological perspective, the role of OT in the hypnotic process may be examined thanks to the use of OT antagonists. That is, blocking receptors of OT during a hypnotic session may help to determine the extent to which OT is necessary to the hypnotic experience and its therapeutic effects.

Moreover, the endogenous level of OT could be measured before and after a determined number of hypnotic sessions performed on a randomized group of subjects in order to establish the conditions and the extent to which hypnotic suggestions may modulate that neurobiological factor.

It may also be of interest to determine whether or not a symbolic relationship with one’s benevolent unconscious mind, perceived as a spiritual companion, may generate a long-lasting feeling of safety and may lead to a higher level of endogenous OT, a better health or well-being.

Finally, from a neurological perspective, the anterior cingulate cortex (ACC) may constitute another bridge between clinical hypnosis and attachment theory, since it is thought to be involved in social rejection (Cozolino, 2006, 2010; Eisenberger & Lieberman, 2004; Hanson & Mendius, 2009), attachment mechanisms (Neumann, 2008),
and hypnotically modulated pain (Faymonville, Boly, & Laureys, 2006; Faymonville et al., 2003; Vanhaudenhuyse, Boly, Laureys, & Faymonville, 2009). Its implication in social interactions and hypnotic phenomena justify its examination from an integrative perspective.

**Conclusion**

This article suggests that attachment theory provides a valuable perspective on the therapeutic effectiveness of clinical hypnosis. It proposes that basic tenets of attachment theory are inherent to various hypnotic strategies and that a deliberate integration of attachment concepts within the framework of clinical hypnosis may not only facilitate attachment mechanism but also modulate neurobiological factors associated with health and well-being.

In particular, it proposes that by wording hypnotic suggestions according to utilization approach, a therapist may display the characteristics of an attentive, responsive, sensitive, available, and benevolent caregiver and hence may facilitate the development of a secure attachment relationship with the patient. Since secure attachment is known to benefit health and well-being, hypnotic suggestions that favor secure attachment could play an important role in therapy.

Furthermore, this article proposes that not only the structure but also the content of many hypnotic suggestions may facilitate secure attachment. For instance, metaphors integrating the concepts of “safe place” and “secure caregiver” may favor patient’s feeling of relational safety, may elicit the development of a secure attachment relationship, and may reduce the subject’s vulnerability with regard to psychopathologies.

Moreover, because of the commonalities unifying attachment theory and clinical hypnosis, the neurobiological correlates of an adequate attachment may be similar to the neurobiological correlates underpinning the hypnotic process. Hence, attachment mechanisms may constitute a link between clinical hypnosis and a neurobiological factor such as oxytocin. Finally, this article examines the implications of that integrative model for future researches and clinical practice.

**References**


In M. Yogman & T. B. Brazelton (Eds.), *Affective development in infancy* (pp. 95–124). Norwood, NJ: Ablex.


Thioly, F. (2007). TCC et hypnose d’inspiration ericksonienne [CBT and Ericksonian hypnosis]. In A. Bioy & D. Michaux (Eds.), Traité d’hypnothérapie: Fondements,


Hypnose, Anhänglichkeit und Oxytocin: Eine Integrative Perspektive

Vladimir Zelinka, Yann Cojan und Martin Desseilles


Stephanie Reigel, MD

Hypnose, attachement et oxytocine: une perspective intégrative

Vladimir Zelinka, Yann Cojan et Martin Desseilles

Résumé: Cet article examine les liens entre l’hypnose clinique, la théorie de l’attachement et l’oxytocine. D’abord, il émet l’hypothèse que les points communs entre l’hypnose clinique et la théorie de l’attachement peuvent nous aider à mieux comprendre le processus hypnothérapeutique. Ensuite, il suggère qu’un modèle intégratif unissant l’hypnose clinique et la théorie de l’attachement peut constituer un lien entre l’hypnose clinique et un facteur neurobiologique tel que l’oxytocine. Enfin, il aborde les implications de ces hypothèses pour la pratique clinique et les recherches futures.

Johanne Reynault

C. Tr. (STIBC)

Hipnosis, apego, y oxitocina: Una perspectiva integradora

Vladimir Zelinka, Yann Cojan, y Martin Desseilles

Resumen: Este artículo considera los vínculos entre la hipnosis clínica, la teoría del apego, y la oxitocina. Primero, propone que las características en común entre la hipnosis clínica y la teoría del apego podrían mejorar nuestro entendimiento del proceso hipnoterapéutico. Luego, sugiere que un modelo integrador que unifique la hipnosis clínica y la teoría del apego podría constituir un vínculo entre la hipnosis clínica y un factor neurobiológico como la oxitocina. Finalmente, discute las implicaciones de estas hipótesis para la práctica clínica y futuras investigaciones.

Omar Sánchez-Armáss Cappello, PhD

Autonomous University of San Luis Potosi,
Mexico