

Gunther Schmidt frei. Ferner kamen Christoph Kraiker als Schriftführer und Bernhard Trenkle als Herausgeber des M.E.G.a.Phons hinzu.

Nach einer Reihe kleinerer Veränderungen im Lauf der Zeit, die hier nicht alle im einzelnen aufgeführt werden sollen - wir bitten die entsprechenden Kolleginnen und Kollegen um Nachsicht, wenn sie nicht erwähnt werden -, erfolgte die erste größere Umbesetzung des Vorstandes erst wieder 1996, als Bernhard Trenkle erster Vorsitzender wurde und Dirk Revenstorf die Führung der neugegründeten „Akademie für Hypnose und allgemeine Psychotherapie“ übernahm, welche sich - wie oben schon angedeutet - um die Institutionalisierung der Hypnotherapie als eigenständiges Verfahren kümmern soll. Dieser Akademie gehört u.a. auch der derzeitige Präsident der *International Society of Hypnosis (ISH)*, Walter Bongartz, an.

Nicht unbedeutend war auch die Aufnahme der M.E.G. in die *European Society of Hypnosis (ESH)* und in die *ISH* im Jahre 1989, sowie die Organisation jener kleinen, aber in ihren Auswirkungen sehr weitreichenden *Joint Conference: Ericksonian Hypnosis and Psychotherapy*, 1992 in Jerusalem, welche - man glaubt es heute kaum noch - die damals stark verfeindeten Lager der „Traditionalisten“ und „Ericksonianer“ an einen Tisch brachte. Seitdem ist diese spezielle Form der Dichotomisierung obsolet, welche nach dem Tod Ericksons 1980 in der internationalen Hypnosegemeinschaft ausgebrochen war.

Daß die M.E.G. die Ehre hat, im Jahre 2000 den traditionsreichen *15. Internationalen Kongreß für Hypnose* an der Universität München durchzuführen, ist aber auch das Ergebnis der kontinuierlichen Arbeit der vielen Kolleginnen und Kollegen innerhalb und außerhalb der M.E.G., die sich um die klinische Weiterentwicklung, Evaluierung und wissenschaftliche Fundierung von Hypnose und Hypnotherapie kümmern. Neben den verschiedenen deutschsprachigen Büchern, die in der Zwischenzeit erschienen sind, zeugt davon auch unsere Zeitschrift *HYPNOSE UND KOGNITION*, die auch dieses Mal mit einer Erstauflage von 3000 erscheint.

Als Gründungsmitglieder wünschen wir der M.E.G. von Herzen, daß sie in Ihrem Bemühen weiterhin erfolgreich sein möge, moderne Hypnose wirksam in den Dienst der öffentlichen Gesundheit zu stellen. („Modern hypnosis in the service of public health“ wird das Leitthema sein für den *15. Internationalen Kongreß für Hypnose* im Jahre 2000 in München.) Weiterhin wünschen wir der M.E.G., daß sie auch im Vorstand jung genug bleiben möge, um mit genügend Kraft und Frische die Jahrhundert- bzw. Jahrtausendschwelle gut überspringen zu können, ohne von der z.Z. grassierenden und demnächst noch virulenter werdenden Eso-Krankheit infiziert zu werden. Diese Krankheit hatte Hypnose vor genau 100 Jahren schon einmal befallen, damals unter dem Namen Spiritismus und Mediumismus, und es hat lange gedauert, in Deutschland über 70 Jahre, bis die wissenschaftlich fundierte Hypnose international und dann auch in den deutschsprachigen Ländern wieder ernsthaft Fuß fassen konnte.

München, 1. Mai 1998

Burkhard Peter
Wilhelm Gerl
Alida Iost-Peter

From the World of Experimental and Clinical Hypnosis

■ Der Newsletter der International Society of Hypnosis (ISH) veröffentlicht regelmäßig gut lesbare Zusammenfassungen über laufende oder abgeschlossene Forschungsprojekte aus dem Bereich der klinischen und experimentellen Hypnose. Im Folgenden ist eine kleine Auswahl davon mit Erlaubnis des Herausgebers Burkhard Peter wiederabgedruckt. Weitere Informationen über den Bezug dieses Newsletters oder über die International Society of Hypnosis (ISH) können angefordert werden beim derzeitigen Präsidenten der ISH:

PD Dr. Walter Bongartz
Fachgruppe Psychologie
Universität Konstanz
Universitätsstr. 10
D-78434 Konstanz
Walter.Bongartz@uni-konstanz.de
oder direkt von:

ISH Central Office
Level 1, South Wing
Austin and Repatriation Medical Centre
Repat Campus
Locked Bag 1
West Heidelberg, VIC. 3081
AUSTRALIA
Fax.: +61/3/9496-4107
100353.747@compuserve.com
<http://www.ish.unimelb.edu.au>



Brain imaging studies of hypnosis and hypnotic modulation of pain affect

(Pierre Rainville, M. Catherine Bushnell, and Gary H. Duncan)

The efficacy of hypnotic analgesia is widely recognized in a variety of clinical settings but the neurophysiological mechanisms of such modulation remain largely unknown. Kiernan et al. (1995) have shown that hypnotic suggestions for analgesia can act at least partly on neurophysiological systems involved in pain transmission at the spinal level. At higher levels of the neuraxis, hypnotic suggestions for hyperaesthesia and analgesia modulate the amplitude of laser-evoked brain potentials (Arendt-Nielsen et al., 1990), but conflicting results have been reported using electric shocks (Meier et al., 1993). One possible reason for this discrepancy might reside in the dimension of pain perception modulated by the hypnotic suggestion. Meier et al. (1993) reported changes mainly in the affective and evaluative dimensions of pain perception and little effect on its sensory dimension. The significant modulation observed by Arendt-Nielsen et al. (1990) might reflect a higher correlation of sensory processes with pain-evoked potentials likely dependent on activity within the somatosensory cortices. These studies illustrate important questions relative to (1) the cerebral correlates of the sensory and affective dimensions of pain perception, and (2) the cerebral mechanisms involved in the hypnotic modulation of pain.

A series of experiments was undertaken using hypnotic suggestions specifically designed to dissociate the sensory and the affective dimension of pain (Rainville et al., in preparation). In one experiment, hypnotic suggestions to reduce or increase the affective response to pain (1-min. immersion of the left hand in 47°C water) were effective in modulating pain unpleasantness without changing pain intensity as indexed by psychophysical ratings (Carrier et al., 1996). These experimental conditions were subsequently applied in a functional brain imaging study using positron emission tomography (PET) in eight highly hypnotizable subjects (Rainville et

al., 1997). In a restful awake state, the painful stimuli produced increases in regional cerebral blood flow (rCBF) in primary (SI) and secondary (SII) somatosensory cortices, in the insular (IC), and in the anterior cingulate cortex (ACC), consistent with previous findings. During hypnotic relaxation, comparable pain ratings and pain-evoked rCBF changes were found indicating little effect of the induction of hypnosis alone on pain perception and pain-evoked cerebral activity. In contrast, hypnotic suggestions to alter pain affect, given before test scans, produced major changes in pain-evoked responses in ACC but not in SI. Suggestions to increase pain unpleasantness led to larger rCBF increases in the ACC, compared with those observed following suggestions to reduce pain unpleasantness. Moreover, rCBF in ACC correlated significantly to the subjects' ratings of pain unpleasantness reported at the end of each scan. These results suggest that the ACC is implicated in pain affect and confirms that hypnotic modulation of pain perception modifies cerebral activity in cortical regions activated by pain (see also Kropotov et al., 1997).

The cognitive nature of hypnotic interventions undoubtedly relies at least partly on higher brain function. Additional analyses of the PET-data (Rainville et al., accepted) showed major changes in rCBF associated with the induction of the hypnotic state, independent of pain, and consistent with those found in other altered states of consciousness (e.g. Hofle et al., 1997; Kjaer et al., 1997). Increases in rCBF were observed in bilateral occipital, bilateral lateral frontal, and right ACC, while decreases were found in posterior and medial parietal cortices. This pattern of activation likely reflects the multiple cognitive processes suggested as key components in the establishment of hypnotic states. These mechanisms might include attention to internal thoughts and disattention to external stimuli, visual imagery, and disorientation toward space, time, and sense of self (Crawford and Gruzelier, 1992; Price, 1996). In addition to their effect on pain-related activity, the suggestions for pain affect modulation produced a widespread increase in frontal rCBF stronger in the left hemisphere

nal of Psychophysiology, 27, 1-8.
Meier, W., Klucken, M., Söky, D., and Bromm, B. (1993). Hypnotic hypo- and hyperalgesia: divergent effects on pain ratings and pain-related cerebral potentials. *Pain*, 53, 175-81.
Price, D.D. (1996). Hypnotic analgesia: psychological and neural mechanisms. In Barber J. (ed), *Hypnosis and Suggestion in the Treatment of Pain: A Clinical Guide*. New York: Norton, pp. 67-84.

Rainville, P., Duncan, G.H., Price, D.D., Carrier, B., and M.C. Bushnell (1997). Pain affect encoded in human anterior cingulate but not somatosensory cortex. *Science*, 277, 968-970.

Rainville, P., Hofbauer, R.K., Paus, T., G.H. Duncan, Bushnell, M.C., and Price, D.D. (accepted). Cerebral mechanisms of hypnotic induction and suggestion. *Journal of Cognitive Neuroscience*.

Rainville, P., Carrier, B., Hofbauer, R.K., Duncan, G.H., and Bushnell M.C. (in preparation). Dissociation of pain sensory and affective processes using hypnotic modulation.

Pierre Rainville, Ph.D., Université de Montréal, Centre de recherche en sciences neurologiques, C.P. 6128, succursale A, Montréal Québec H3C 3J7, Canada; rainvilp@medent.umontreal.ca

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Posthypnotic suggestion: exploding myths and maximizing effects

(Amanda J. Barnier)

For the past eight years I have been involved in research investigating the nature of hypnosis. That research has focused on a range of issues, including, for instance, the impact of hypnosis on memory and the construction of false memories (Barnier & McConkey, 1992), the hypnotised individual's experience of hypnotic phenomena (McConkey, Wende, & Barnier, 1997), and the use of hypnosis to understand clinical phenomena such as delusions (Burn, Barnier, & McConkey, 1997). However, the area in which I have been most interested in recent years is posthypnotic suggestion.

A posthypnotic suggestion is a suggestion given during hypnosis that asks the hypnotised

References

- Arendt-Nielsen, L., Zachariae, R., and Bjerring, P. (1990). Quantitative evaluation of hypnotically suggested hyperaesthesia and analgesia by painful laser stimulation. *Pain*, 42, 243-251.
- Carrier, B., Rainville, P., Duncan, G.H., and Bushnell, M.C. (1996). Hypnotic (affective) analgesia during tonic heat pain. *International Association for the Study of Pain*, Abst. #134.
- Crawford, H.J., and Gruzelier, J.H. (1992). A mid-stream view of the neuropsychology of hypnosis: recent research and future directions. In Erika Fromm and Michael R. Nash (Eds) *Contemporary hypnosis research*, N.Y.: Guilford Press, pp. 227-266.
- Hofle, N., Paus, T., Reutens, D., Fiset, P., Gotman, J., Evans A.C., and Jones B.E. (1997). Regional cerebral blood flow changes as a function of delta and spindle activity during slow wave sleep in humans. *Journal of Neuroscience*, 17: 4800-4808.
- Jasiukaitis, P., Nouriani, B., Hugdahl, K., and Spiegel, D. (1997). Relateralizing hypnosis: Or, have we been barking up the wrong hemisphere? *The International Journal of Clinical and Experimental Hypnosis*, 45, 158-177.
- Kiernan, B.D., Dane, J.R., Phillips, L.H., and Price, D.D. (1995). Hypnotic analgesia reduces R-III nociceptive reflex: further evidence concerning the multifactorial nature of hypnotic analgesia. *Pain*, 60, 39-47.
- Kjaer, T.W., Lou, H.C., Nowak, M., Wildschmidt, G., and Friberg, L. (1997). Consciousness quality and quantity. *Society for Neuroscience Abstracts*, Abst.#192.12, 496.
- Kropotov, J.D., Crawford, H.J., and Polyakov, Y.I. (1997). Somatosensory event-related potential changes to painful stimuli during hypnotic analgesia: anterior cingulate cortex and anterior temporal intracranial recordings. *International Jour-*

person to have a particular experience or show a particular behaviour after hypnosis, and usually in response to a specific cue. For example, the hypnotist might suggest to the hypnotised subject that they will rub their right ear lobe when the hypnotist says "Well, what did you think of that?" after hypnosis. Typically, if the person is highly hypnotisable they will rub their ear lobe when they hear those words. Although this is a somewhat trivial example, posthypnotic suggestions can range from the very simple to the very complex. For instance, Liégeois (1889) reported a successful posthypnotic suggestion that involved a visual hallucination of a dog with a monkey on its back coming into the room, followed by a gypsy and a large, tame, dancing, American bear.

Posthypnotic suggestion was first identified by Moulléseaux (1787) as one of the essential magnetic phenomena (i.e., in the context of animal magnetism and Mesmerism). It has continued to be a source of fascination across the history of investigation into hypnosis because of both its theoretical importance and its utility in the clinical setting. Posthypnotic suggestion has been used very successfully to treat a range of psychological and medical problems, including insomnia, hypertension, anxiety, phobias, chronic pain, and obesity. In fact, a recent meta-analysis indicated that the addition of hypnotic or posthypnotic techniques to cognitive-behavioural therapy substantially enhances treatment outcomes; in particular, the average client receiving hypnotic treatment showed greater improvement than at least 70% of clients receiving nonhypnotic treatment (Kirsch, Montgomery, & Sapirstein, 1995).

Posthypnotic suggestion contains the two elements central to traditional notions of the impact of a hypnotic suggestion: first, the individual appears to experience an overwhelming compulsion to perform the behaviour; and second, they show a relative lack of awareness of the source of motivation for their behaviour. Based on these characteristics, posthypnotic responding has generally been explained in both the professional and popular literature in terms of an unconscious, irresistible urge or impulse to carry out the suggested response. In particular, it has been

assumed that posthypnotic suggestions can be used to control behaviour, that individuals cannot resist responding to them, and that their effects will last indefinitely unless the hypnotist cancels them. Despite the widespread acceptance of these views, surprisingly little empirical research has focused on posthypnotic suggestion in recent years and the last major theoretical review of posthypnotic suggestion was published nearly three decades ago (Sheehan & Orne, 1968).

Accordingly, for my doctoral research I conducted a series of nine experiments that investigated the nature of posthypnotic suggestion and responding. The aims of my research were: (1) to develop a model of posthypnotic suggestion and responding that would integrate the findings of present and past research; (2) to provide a framework for future research and clinical applications of posthypnotic suggestion; and (3) to provide empirical evidence relevant to popular beliefs about posthypnotic suggestion.

The first five experiments in my research program explored the factors that influence posthypnotic suggestion and responding, including the focus of the suggestion, the way in which the response is tested, the role of amnesia in responding, and the cancellation of the suggestion. For instance, in one experiment, participants were given a posthypnotic suggestion that either did or did not specify how long responding should continue, and their response was tested four times. Those who were given a suggestion that included information about how long they should respond were more likely to continue responding across the tests than those who were given a suggestion that did not include this information. In other words, when people perceived that they were not expected to continue responding, they stopped, whereas when they perceived that they were meant to continue responding, they did so. This finding contradicts the popular myth that if a posthypnotic suggestion is not cancelled by the hypnotist, then it will endure beyond the time and setting in which it was administered. Rather, hypnotised individuals only respond for as long as they think is required or is appropriate.

Experiments 6 and 7 investigated the individual's experience of posthypnotic responding,

For instance, in one experiment, participants were told prior to hypnosis that posthypnotic suggestions are always carried out with their dominant hand, but then during hypnosis they were given a posthypnotic suggestion to carry out a particular behaviour with their nondominant hand; in other words, the posthypnotic suggestion conflicted with the information given prior to hypnosis. All of the participants responded on the basis of the second, hypnotic message and used their nondominant hand (which is not surprising given past findings on countering preconceptions and the impact of conflicting communications; McConkey, 1983; Sheehan, 1971). More importantly, however, although subjects' behavioural response was consistent with the hypnotic message, all of the participants described having to decide during hypnosis whether it would be more appropriate to respond with their dominant or nondominant hand after hypnosis; as noted, all subjects decided that it would be more appropriate to follow the hypnotic message and use their nondominant hand. This indicated that they held particular expectations about the conduct of an hypnosis session and the way in which they should respond, and that they worked actively to interpret the conflicting messages given by the hypnotist. This finding contradicts the popular myth that individuals cannot resist a posthypnotic suggestion and will respond automatically and without awareness to whatever the hypnotist says. Rather, my work shows clearly that hypnotised individuals engage in active decision-making in order to interpret the messages they receive during hypnosis and then respond in an appropriate way.

The final two experiments investigated posthypnotic responding away from the experimental setting. For instance, in one experiment, high and low hypnotisable participants (note that the lows were asked to simulate hypnosis according to Orne's real-simulating paradigm) were given a posthypnotic suggestion to send one postcard every day to the hypnotist until she contacted them again. In addition, a group of nonhypnotic, "control" participants were given a simple request to carry out the same task. The hypnotist contacted participants approximately 8

weeks later. Some people continued to respond away from the influence of the laboratory and the hypnotist for up to 8 weeks. Also, whereas low hypnotisable, simulating participants sent far fewer postcards than high hypnotisable participants, the control participants who were simply asked to carry out the task sent as many postcards as high hypnotisable participants. This finding contradicts popular myth that posthypnotic suggestion is a particularly effective means of controlling an individual's behaviour. Rather, a posthypnotic suggestion is no more effective in eliciting a behaviour than a simple, nonhypnotic request to carry out the task. Importantly, however, the experiences of individuals given the posthypnotic suggestion and those given the nonhypnotic request were quite different. In particular, subjects given the nonhypnotic request generally described their response as strategic and "contractual"; that is, they had made a commitment to the experimenter to respond. In contrast, subjects given the posthypnotic suggestion were more likely to describe their responding as effortless and automatic; for many, the posthypnotic suggestion just seemed to "pop" into their mind each day.

The findings from my research indicate that hypnotised individuals place meaning on the communications of the hypnotist, and look to the specific features of the posthypnotic suggestion and test to guide their responding. Contrary to popular belief, they do not respond to a posthypnotic suggestion automatically or in a "robotic" fashion, nor are they totally unaware of the reasons for their behaviour. Rather, high hypnotisable individuals put considerable thought and effort into interpreting the "meaning" of a posthypnotic suggestion, and attempt to respond in a way that is appropriate to the situation in which they find themselves. The fact that they are able to do this while maintaining a compelling and compulsive personal experience highlights their special individual abilities and the role of particular cognitive mechanisms, rather than the power of the suggestion or the hypnotist.

Although my research, in some sense, "exploded" myths about hypnosis and posthypnotic suggestion, it also offered ways for maxi-

missing the effectiveness of these techniques when used by health care professionals to treat psychological or medical problems. In particular, my research suggests ways to make a posthypnotic suggestion more powerful and last longer. For instance, in a number of experiments both inside and outside the laboratory, I found that individuals who were given a suggestion that included information about how long they should respond were more likely to continue responding over time than those who were given a suggestion that did not include this information. One possibility is that clients who are given, in the context of a clinical treatment program, a posthypnotic suggestion that includes very specific information about how long it will last may continue to experience positive effects far longer than clients who are given a suggestion that does not include such information. In my research, I also found that individuals who were most successful in responding to the posthypnotic suggestion to send postcards were more likely to have integrated the task into their daily lives; in particular, they described receiving a great deal of support and encouragement from their families. Those who were less successful in this task were more likely to have kept the task secret from their friends and families or to have experienced negative responses to their participation. One implication of this finding is that clinical posthypnotic suggestions (e.g., to stop smoking or to control poor dietary habits) may be more successful if the client is encouraged to integrate the suggested behaviour into their daily lives and if family and friends encourage and reinforce the desired response. These are issues for future research.

I am continuing to investigate aspects of hypnosis. Currently, I am in the initial stages of a project focusing on autobiographical memory and amnesia as it relates to recovered/repressed memory, and I am using hypnosis to assist me in that investigation. Like posthypnotic suggestion, this topic is both conceptually and empirically difficult to investigate and is widely misunderstood and misrepresented. However, I am confident that a scientific and critical approach to such phenomena can generate novel and impor-

tant findings.

References

- Barnier, A.J., & McConkey, K.M. (1992). Reports of real and false memories: The relevance of hypnosis, hypnotizability, and context of memory test. *Journal of Abnormal Psychology*, 101, 521-527.
- Burn, C., Barnier, A.J., & McConkey, K.M. (1997). Hypnotic sex change: Information processing in an experimentally created delusion. Manuscript submitted for publication.
- Kirsch, I., Montgomery, G., & Sapirstein, G. (1995). Hypnosis as an adjunct to cognitive-behavioral psychotherapy: A meta-analysis. *Journal of Consulting and Clinical Psychology*, 63, 214-220.
- Liégeois, J. (1889). De la suggestion et du somnambulisme dans leurs rapports avec la jurisprudence et la médecine légale. Paris: Octave Doin.
- McConkey, K.M. (1983). The impact of conflicting communications on response to hypnotic suggestion. *Journal of Abnormal Psychology*, 92, 351-358.
- McConkey, K.M., Wende, V., & Barnier, A.J. (1997). Measuring change in the subjective experience of hypnosis. Manuscript submitted for publication.
- Mouilleseaux, de (1787). Appel au public sur le magnétisme animal, ou Projet d'un journal pour le seul avantage du public, et dont il servait le coopérateur.
- Sheehan, P.W. (1971). Countering preconceptions about hypnosis: An objective index of involvement with the hypnotist. *Journal of Abnormal Psychology Monograph*, 78, 299-322.
- Sheehan, P.W., & Orne, M.T. (1968). Some comments on the nature of posthypnotic behavior. *Journal of Nervous and Mental Disease*, 146, 209-220.

Publications from the research program

- Barnier, A.J., & McConkey, K.M. (1995). An experimental analysis of conflict resolution in hypnosis. In G. Burrows & R. Stanley (Eds.), *Contemporary international hypnosis*. London: Wiley Publications.
- Barnier, A.J., & McConkey, K.M. (1996). Action and desire in posthypnotic responding. *International Journal of Clinical and Experimental Hypnosis*, 44, 120-139.
- Barnier, A.J., & McConkey, K.M. (in press a).

Posthypnotic responding: Knowing when to stop helps to keep going. *International Journal of Clinical and Experimental Hypnosis*.

Barnier, A.J., & McConkey, K.M. (in press b). Posthypnotic responding: The relevance of suggestion and test congruence. *International Journal of Clinical and Experimental Hypnosis*.

Barnier, A.J., & McConkey, K.M. (in press c). Posthypnotic suggestion, amnesia, and hypnotizability. *Australian Journal of Clinical and Experimental Hypnosis*.

Barnier, A.J., & McConkey, K.M. (1997a). Posthypnotic responding away from the hypnotic setting. Manuscript submitted for publication.

Barnier, A.J., & McConkey, K.M. (1997b). Posthypnotic suggestion, response complexity, and amnesia. Manuscript submitted for publication.

Barnier, A.J., & McConkey, K.M. (1997c). Hypnotic and posthypnotic suggestion: Finding meaning in the message of the hypnotist. Manuscript submitted for publication.

Amanda J. Barnier, PhD, School of Psychology, University of New South Wales, Sydney, NSW 2052, Australia, fax: +61 2 9385 3830, A.Barnier@unsw.edu.au

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Dissociation and hypnotizability

(Eric Vermetten)

There is a new book coming out in 1998: *Trauma, Memory and Dissociation*, edited by J. Douglas Bremner and Charles R. Marmar. It is released in a Series 'Progress In Psychiatry' by David Spiegel, who is series editor, American Psychiatric Press. One chapter is called *Dissociation and Hypnotizability: A conceptual and Methodological Perspective on Two Distinct Concepts*, by Eric Vermetten, M.D., J. Douglas Bremner, M.D., and David Spiegel, M.D. pages 107-161. There are other interesting chapters by Frank Putnam, Onno van der Hart, John Nemiah to name a few.

In our chapter, we describe the concepts of both hypnosis and dissociation, focusing on the conceptualization of both terms, their phenomena and on similarities and differences in measurement of hypnotizability and dissociative capacity or 'dissociativity'. There is a strong concep-

tual relationship between hypnosis and dissociation. Hypnotizability and dissociation can be conceptualized as dimensional constructs, reflecting ranges of intensity along a continuum. There is some degree of overlap between hypnotizability and dissociation. The exact degree to which there is overlap continues to be a subject of debate. Hypnosis may account for many of the findings attributed to dissociation and dissociative disorders. The viewpoint is described that dissociative processes can range along a continuum from normal dissociation to DSM-IV axis I psychopathology. Dissociation seems to account for a shift in modern psychology and psychiatry through its widespread clinical relevance and recognition by cognitive sciences. It is strongly related to consciousness, conflict/trauma and unity of the self. Like hypnosis dissociation can be measured by various scales, all focusing on slightly different aspects of the concepts and using different methodologies. Dissociation raises fundamental questions about the relation of the mind to the body. Hypnotic and dissociative capacities are both a liability and an asset. They could be advantageous or beneficial for the human organism in certain contexts or time frames (e.g. forgetting or not feeling of painful stimuli, being distracted from irrelevant information), but high hypnotic and dissociative capacities can be disadvantageous, harmful and lead to various dysfunctions, pathology (e.g. amnesia, time gaps, flash-backs, conversion disorders) and severe psychopathology like dissociative identity disorder (DID). Both hypnotizability and dissociativity are related to control vs. loss of control over psychological and physical functions. Physical, emotional or sexual trauma can play a major role in the shift of this control function. Evidence is reviewed that trauma can lead to various dysfunctions that can manifest in psychological and/or bodily or somatic problems. Trauma plays a major role at least in the clinical connection between hypnotizability and dissociation. The methodology of the measurements of both hypnotizability and dissociation can serve an important purpose for a better understanding of their combined meaning in research

and clinical practice. Everyone 'knows' what is meant by hypnosis and dissociation even though the specific nature of these terms is difficult to describe. Hypnosis and dissociation seem to be both widely used in modern psychology and psychiatry and are at the same time rather unclear or controversial concepts. Hypnosis and dissociation have a long history in both disciplines. Hypnosis was first used by Braid in 1843 to describe a state for which he used the word 'neurohypnology', whereas Janet wrote about dissociation in 1892 (Ellenberger, 1970). Janet first used the term 'desagregation mentale' to describe this process. Reviews of literature of the last three decades shows evidence that a robust physiological phenomenon is underlying hypnosis (e.g. see Barber, 1961; Crawford, 1991; Spiegel and Vermetten, 1994). Moreover, hypnosis has found itself a legitimate place in both medical and psychotherapeutic practice (Frankel, 1987), and dissociation has been the focus of attention of a large body of research for approximately a decade (Klein and Doane, 1994; Lynn and Rhue, 1994; Spiegel, 1994). The section on Dissociative Identity Disorders in DSM-IV (APA, 1994) shows that dissociation has been given a place in diagnostic psychiatric practice and research.

References

- American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders (Fourth edition) Washington, DC, American Psychiatric Association, 1994
- Barber TX: Physiological effects of 'hypnosis'. *Psychol Bull* 58:390-419, 1961
- Ellenberger HF: The Discovery of the Unconscious. New York, Basic Books, 1970
- Frankel FH: Significant developments in medical hypnosis during the past 25 years. *Int J Clin Exp Hypn* 35: 231-247, 1987
- Klein RM, Doane BK (eds.): Psychological Concepts and Dissociative Disorders. Lawrence Erlbaum Assoc., New Jersey, 1994
- Lynn SJ, Rhue JW (eds.): Dissociation: Clinical and Theoretical Perspectives. New York: Guilford Press, 1994
- Spiegel D and Vermetten E: Physiological Correlations of Hypnosis and Dissociation. In *Dissociation: Culture, Mind and Body*. Edited by Spiegel D. Washington, American Psychiatric Press,

1994, pp 185-209

Spiegel D (ed.): *Dissociation: Culture, Mind and Body*. Washington, American Psychiatric Press, 1994

Eric Vermetten, MD, *Academic Hospital Maastricht, Dept. Psychiatry, PO BOX 5800, 6202 AZ Maastricht, fax: + 31 43 3875444, eric.vermetten@pings.be*

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Hypnotic trance counteracts tropicamide induced pupils dilatation

(H. Walter, N. Benda, B. Semmler, L. Linzmayer, and J. Grünberger)

Trance states, evoked by hypnosis, cause a constriction of the pupils. Tropicamide is usually used in the oculist's office for pupil's dilatation. Its effects are inhibitory on the M-constrictor pupillae, being an acetylcholine antagonist.

The pupilloconstrictor has parasympathic and the pupillodilator has sympathetic neurotransmissions. By relaxation during a hypnotic trance the autonomic nerve system balances changes gradually towards an increased parasympathic action. Therefore the pupils constrict during a hypnotic trance state.

In 4 healthy subjects we could so far demonstrate that trance counteracts the effects of tropicamide. There is no evidence yet in the pertinent literature, that hypnotic trance can inhibit (or even counteract) the effects of any medication. Therefore we think it is worth telling about these news already at this early stage of the investigations.

Mean pupil's diameter - 1 subject (measured by Pupillometry):

- Step 1: Pupil's diameter measurement before trance
- Step 2: Tropicamide drip (one drop 0.01% Tropicamide)
- Step 3: Trance induction
- Step 4: Measurement during trance (40 minutes after Tropicamide drip): 4,5 mm
- Step 5: Measurement after trance-termination (5 minutes later then step 4): 5,3 mm

In this subject the changes between step 4 and

step 5 are 17,8%. In the three other subjects the changes are 38%, 27% and 17,5% between hypnotic state and post-hypnotic measurement, which means, that only by trance the pupils are constricted in spite of the presence of a pupillodilating agent. After trance termination pupils dilate in the above mentioned percentages, which correspond to the usual tropicamide effects (usually tropicamide induces a 16-20 % dilatation in healthy subjects).

We will follow these first results, proving that trance states are able to counteract a drug effect on neurotransmission.

References

- Grünberger, J., Linzmayer, L., Maida, E.M., Reiten, A., & Walter, H. (1996). Pupillary dilatation test and Fourier analysis of pupillary oscillations in patients with multiple sclerosis. *European Archives of Psychiatry and Clinical Neuroscience*, 246(4), 209-212.
- Grünberger, J., Linzmayer, L., Grünberger, M., & Saletu, B. (1992). Pupillometry in clinical psychophysiological diagnostics: methodology and proposals for application in psychiatry. *Israel Journal of Psychiatry and Related Science* 28(2), 100-113.
- Scinto, L.F.M., Daffner, K.R., Dressler, D., Ransil, B.L., Rentz, D., Weintraub, S., Mesulam, M., & Potter, H. (1994). A potential noninvasive neurobiological test for Alzheimer's disease. *Science*, 266(5187), 1051-1054.
- Walter, H., Grünberger, J., Gutierrez, K., Höfer, C., Lesch, O.M., & Linzmayer, L. (1997). Ideomotorische Pupillenreaktion bei akutem Schmerz vor und während hypnotischer Analgesie. *Hypnose und Kognition*, 14(1+2), 33-36.

Henriette Walter, Prof.Dr.med., *University Clinic of Psychiatry, University of Vienna, Waehringer Guertel 18-20, 1090 Vienna, Austria, Henriette.Walter@akh-wien.ac.at*

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The Somatoform Dissociation Questionnaire (SDQ-20): a new self-report instrument

(Ellert R.S. Nijenhuis)

Clinical observation and research have shown

that dissociative disorder nos (DDNOS) and dissociative identity disorder (DID) are characterized by dissociative amnesia, depersonalisation, derealization, identity confusion and identity fragmentation (Steinberg et al., 1993). Patients with these dissociative disorders, as a rule, have also many somatic symptoms, and somatization disorder is a frequent and serious comorbid disorder among them. As according to 19th century and contemporary clinical observation, dissociation also pertains to somatoform components of experience, reactions and functions, these somatic symptoms may reflect dissociative phenomena. Somatoform dissociation, as we (Nijenhuis et al., 1996a) recently proposed to label the construct, for example includes anesthesia, motor inhibitions, uncontrolled movements, and altering taste preferences. With some exceptions (e.g., Kihlstrom, 1994; Nemiah, 1991), however, modern perspectives on dissociation have not recognized that dissociation may manifest in the body, and research that evaluates the presence of somatoform dissociative phenomena in dissociative and other psychiatric patients is lacking.

Because a suitable instrument was unavailable, we constructed a somatoform dissociation questionnaire, and we assessed its psychometric characteristics. Using this device, we next evaluated somatoform dissociation in various psychiatric disorders, and studied its relationship with reported trauma. The first of a series of papers on this work has recently appeared in the *Journal of Nervous and Mental Disease*, and describes the development and psychometric characteristics of the Somatoform Dissociation Questionnaire (SDQ-20). Its content may be summarized here.

We asked patients with DDNOS and DID (N = 50) and with other DSM-IV psychiatric diagnoses (N = 50) to complete a list of 75 items that according to clinical experience and expert judgement could reflect instances of somatoform dissociation. Separate logistic analyses and determination of discriminant indices per item revealed 20 items that best discriminated between cases and non-cases. Mokken analysis showed that these items are strongly scalable on a unidimensional latent scale, which we interpreted

ted to measure somatoform dissociation (Loevinger's general scalability coefficient $H = .50$). The reliability of this Somatoform Dissociation Questionnaire (SDQ-20) was excellent (Cronbach's $\alpha = .95$). Construct validity was supported by high intercorrelations with the DIS-Q (Vanderlinden et al., 1993), which measures psychological dissociation (the subscales include dissociative amnesia, identity confusion/fragmentation, loss of control, and absorption), and higher SDQ-20 scores of patients with dissociative identity disorder compared to patients with dissociative disorder not otherwise specified. We concluded that the SDQ-20 is a scale of good psychometric quality.

In our view, most of the SDQ-20 items pertain to losses of perceptions and of control over functions (sensory losses, loss of control over movement), and to intrusions (alterations of vision, audition, taste, and smell, as well as to pain symptoms in the urogenital area, and difficulty urinating). Interestingly, according to Janet (1901/77), these negative and positive somatoform dissociative symptoms, as we proposed to call them, belong to the mental stigmata and mental accidents of hysteria, i.e., the essential characteristics of the disorder. Our findings concord with Janet's observations.

As a next step, we studied whether a subset of SDQ-20 items could constitute a screening instrument for dissociative disorders (Nijenhuis et al., in press). Using logistic analysis five items were detected that as a group provided optimal discrimination between dissociative disorder patients and comparison patients. It appeared that this SDQ-5 has high sensitivity and specificity, as well as satisfactory positive predictive value, and excellent negative predictive value. The results of these first studies on the SDQ-20 and SDQ-5 suggest that somatoform dissociation is as characteristic of DDNOS and DID as psychological dissociation is. Subsequent work with the SDQ-20 and SDQ-5 is forthcoming.

Our clinical experience suggests that somatoform dissociative symptoms are often part and parcel of dissociated memory/identity structure.

res. Hypnotic techniques can be applied to symptomatically treat somatoform dissociative symptoms. Hypnosis may also be helpful in tracing possible meanings or functions of such symptoms, provided that it is applied in the context of sound clinical practice. For example, using ideomotor finger signals, a dissociative (child)state of a patient with DDNOS who, amongst others, had severe localized but medically unexplained facial pain, indicated that this pain related to maternal physical abuse when the patient was three. At the time, the patient, who had amnesia for extensive parts of her past, vehemently denied that she was ever abused. However, two years later this alleged abuse, and other physical, sexual and emotional parental abuse as reported by several dissociative states, could be corroborated by an independent source. This clinical example, and many others suggest that it would be important to systematically study the efficacy of hypnotherapy for somatoform (dissociative) disorders.

References

- Janet P (1901) The mental state of hystericals. A study of mental stigmata and mental accidents. New York: Putnam. Translation in English of L'Etat mental des hystériques. Les stigmates mentaux, which also contains an additional part on mental accidents: The mental state of hystericals. A study of mental stigmata and mental accidents. New York: Putnam, 1901. Reprint University Publications of America, 1977.
- Kihlstrom JF (1994) One hundred years of hysteria. In SJ Lynn, JW Rhue (Eds), *Dissociation: Clinical and theoretical perspectives* (pp 365-395). New York: Guilford.
- Nemiah, J.C. (1991). Dissociation, conversion, and somatization. In A. Tasman & S.M. Goldfinger (Eds.), *Annual Press Review of psychiatry*, Vol. 10 (pp.248-260). Washington DC: American Psychiatric Press.
- Nijenhuis, E.R.S., Spinhoven, Ph., Van Dyck, R., Van der Hart, O., & Vanderlinden, J. (1996). The development and psychometric characteristics of the Somatoform Dissociation Questionnaire (SDQ-20). *Journal of Nervous and Mental Disease*, 184, 688-694.
- Nijenhuis, E.R.S., Spinhoven, Ph., Van Dyck, R., Van der Hart, O., & Vanderlinden, J. (in press). The Somatoform Dissociation Questionnaire

(SDQ-5) as a screening instrument for dissociative disorders. *Acta Psychiatrica Scandinavica*. Steinberg M, Cichetti DV, Buchanan J, Hall P, Rounsaville B (1993). Clinical assessment of dissociative symptoms and disorders: The Structured Clinical Interview for DSM-IV Dissociative Disorders. *Dissociation* 6, 3-16.

Vanderlinden J, Van Dyck R, Vandereycken W, Vermeiren H, & Verkes RJ (1993) The Dissociation Questionnaire: development and characteristics of a new self-reporting questionnaire. *Clinical Psychology and Psychotherapy* 1, 21-27

Ellert R.S. Nijenhuis, Ph.D., *Department of Psychiatry, Vrije Universiteit Amsterdam, Valeriusplein 9, 1075 BG Amsterdam, ellertm@globakss.nl*

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On the relationship between memory and hypnosis

(Peter W. Sheehan)

Work in the laboratory at the University of Queensland continues into the analysis of the relationship between memory and hypnosis. For many years, the pattern of experimentation has been to explore in systematic fashion the various parameters and processes affecting the association between hypnosis (and hypnotisability) and hypnotic memory, particularly as they reflect the patterning of memory distortion. Working with the phenomena of pseudomemory and responsiveness to leading questions, in particular, some common parameters have emerged. Not surprisingly, perhaps the main factor affecting the association between memory and hypnosis is that of hypnotic susceptibility or a person's skills in responsiveness to hypnotic suggestions. Depending on the paradigm used, the second category of observation I would make is that hypnosis is a key variable, but not reliably so. Where the influence of hypnosis is evident, however, the pattern of data does suggest that the interaction between hypnotic susceptibility to hypnosis and responsiveness to hypnotic induction is a very relevant combination. A third class of variable which is reliably important is that of confidence. In studying the relationship between

hypnosis and memory, it is important to theorize about a person's confidence as well memory accuracy in recall. Memory distortion is frequently linked with high confidence in the material being recalled and this has clear and definite forensic implications. A fourth category of observation relates to social parameters that define the association between hypnosis and memory. For example, the kind of testing context investigated is clearly relevant. The influence of social factors is also expressed through interpersonal factors, response expectancies and attitudes as well as beliefs. The effects of all these factors have been demonstrated in multiple experiments.

Detailed experimental analysis of the relationship between memory and hypnosis has been virtually overtaken by professional concerns about the reliability of memory (particularly when memories of past events can be said to have been suggested) and the conduct of therapy, in particular. Much of the literature on memory and hypnosis integrates these concerns around the concept of "recovered memory." The threat of litigation has spurred general interest in this phenomenon further forward. Debate about the meaning of recovered memory reflects also specific experimental studies dealing with pseudomemory and the possible interaction of memory distortion with hypnotic susceptibility. The debate also incorporates our knowledge about the influence of interrogation.

The importance of this current and pervasive interest in recovered memory is picked up and discussed in my State-of-the-Art address on hypnosis at the 26th International Congress of Psychology in Montreal, Canada (Sheehan, 1996a), and in a subsequent follow-up address at the 7th European Congress of Hypnosis in Budapest, Hungary (Sheehan, 1996b). Recovered memory is now the pivotal issue, in my opinion, for clinicians and researchers alike who wish to work together in the field of hypnosis and memory. It goes to the heart of the matter of the nature of memory distortion, it reflects key process issues such as whether specific forgotten memories can never be retrieved, and it reaches out to challenge major concepts that have influenced Psycho-

logy as a whole such as repression. Not surprisingly, work within my own laboratory reflects this Zeitgeist. It has been influenced by the stimulation of the literature in the phenomenon of recovery memory and the processes that are claimed to define its influence.

Having spent some six years experimenting in standard scientific fashion on factors that define the relationship between memory and hypnosis, I am now exploring paradigms that merge standard scientific experimentation with clinical complexity. Currently, I am looking for base anchor data relating to recovered memory that emanate from clinical questions delivered in a standard experimental setting. I am especially interested in what subjects (and clients) do with questions that have no obvious personal relevance but the nature of the setting incorporates the kind of questions that the clinician setting might well use. The work is just being done and the data are being analysed. I am reporting briefly on the evidence in Budapest, but more completely in the plenary talk which will be given at the San Diego meeting of the 14th. International Congress of Hypnosis in June, 1997. All three presentations carry on from the recent collaborative work I have been engaged in with Kevin McConkey from The University of New South Wales, Australia, on the use of hypnosis in criminal investigation (McConkey & Sheehan, 1995).

References

- McConkey, K. M., & Sheehan, P. W. (1995). Hypnosis, Memory, and Behavior in Criminal Investigation. New York: Guilford.
- Sheehan, P. W. (1996). Contemporary trends in hypnosis research. (State-of-the Art Address), 26th. International Congress of Psychology. Montreal, August.
- Sheehan, P. W. (1996). Moving to clinical matters in the analysis of memory distortion in hypnosis. 7th. European Congress of Hypnosis, Budapest, Hungary, August.
- Sheehan, P. W. (1997). Recovered memories. Plenary talk presented at 14th. International Congress of Hypnosis, San Diego, USA, June.
- Peter W. Sheehan, Ph.D., *The University of Queensland, Cumber-Straw Building, Research Road, Brisbane Qld 4072, Australia, fax: +61/7/3365-4455*

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On the differences between direct and indirect techniques

(Csabala Szabó)

A growing number of clinicians emphasize the importance of hypnotic communication styles, and claim that indirect techniques are more effective than direct approaches. Other data from experimental laboratories point to the decisive role of the subjects hypnotic susceptibility. Namely, the more susceptible the subject, the more he/she will respond to suggestion, and the deeper the hypnosis will be. The effect of the induction style on the hypnotic response has been investigated in a few experiments. In these experiments hypnotic suggestions were related to overt behaviour, and no differences were found between the effectiveness of direct and indirect suggestion or induction. The problem with this kind of experiments was that the subjects hypnotic susceptibility was measured before the experiment, and this influenced the expectations. Furthermore, the subjects perception of their own hypnotic behaviour influenced the perception and the reporting of subjective experiences.

In our experiment the phenomenology of the experiences and the depth of hypnosis were measured, and the effects of direct and indirect induction were compared. 44 subjects participated in a direct and an indirect hypnosis induction in counterbalanced order. After the induction procedure there was a 4 minute rest, and the delhypnosis followed. There were no suggestions involving overt behaviour. Following the experiment, the subjects were asked to rate the depth of their hypnosis, and to report about their subjective experiences on the Phenomenology of Consciousness Inventory (PCI). Following the inquiries, the subjects were interviewed about their hypnotic experiences. After the second hypnosis, the subjects hypnotic susceptibility was measured with SHSS/B. Categories of subjects of different hypnotic susceptibility were formed for statistical analysis, after the end of the experiment.

Analyzing the data for depth, the effect of induction was significant; the subjective depth was felt to be deeper after the indirect hypnosis. But comparing the groups of different hypnotic susceptibility, it was found that the indirect hypnosis was experienced as being deeper by the subjects of low and moderate susceptibility. Highly hypnotizable subjects reported similar hypnotic depth following both kinds of inductions. The classical hypnotic susceptibility effect was found, namely the more susceptible the subject, the deeper the reported depth. Analyzing the phenomenology of the experiences, MANOVA showed no differences between the PCI factors in the direct and the indirect hypnosis, but there were differences in the content of interviews. It seems that unconscious processes, and transference-like feelings are more dominant in indirect hypnosis. This suggests that a different approach is needed for exploring subjective experiences.

In previous experiments of Dr. Mészáros Istváns laboratory, the physiological correlates of hypnotic state were investigated, and EEG differences were found between the hypnotic and alert state. In further experiments we should like to study the EEG responses following the indirect induction and we are looking for objective physiological indicators to test the effectiveness of suggestion and induction.

References

- Szabó, C. (1993). The phenomenology of the experiences and the depth of hypnosis: Comparison of direct and indirect induction techniques. International Journal of Clinical and Experimental Hypnosis, 41(3), 225-233.
- Szabó, C. (1996). Differences between direct and indirect techniques. Hypnosis International Monograph, Number 2. Munich: M.E.G.-Stiftung.
- Csabala Szabó, Ph.D., *Kossuth Lajos University, Inst. of Psychology, 4010 Debrecen 10, Hungary*

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Fluctuations in Hypnotic Susceptibility

(Benjamin Wallace)

There are many good tests available to assess an

individual's susceptibility to hypnotic responsiveness. Two of these are the Stanford Hypnotic Susceptibility Scale, Form C, and the Harvard Group Scale of Hypnotic Susceptibility, Form A. Generally, if one scores above 9 (on a 12-point scale) on either of these tests, one is considered to be a good hypnotic subject. A score below 3 is indicative of one being a poor hypnotic subject. But what if one's score is not an absolute? What if the score is partially determined by level of alertness? This was the basis for several experiments that examined hypnotic susceptibility as a function of whether one was considered to be a so-called day person or a so-called night person. A day person was defined as one who is most alert during the daylight hours; a night person is most alert during late afternoon and evening hours.

Both day and night persons (defined as such by an alertness questionnaire that I developed) were administered either the Stanford or the Harvard test each hour between 8 a.m. and 10 p.m. In addition, oral temperature was assessed during each administration period.

Regardless of test used, day persons exhibited peak susceptibility to hypnotic suggestion at 10 a.m. and 2 p.m. Night persons, however, exhibited peak susceptibility at 1 p.m. and between 6 p.m. and 9 p.m. Furthermore, 2 peaks of temperature increase (1 p.m. and 6 p.m.) appeared to be associated with peaks in hypnotic susceptibility. However, such was shown to be associated with period of food intake rather than with increases in hypnotic susceptibility.

Based on the results of experiments from my laboratories, it is clear that individuals exhibit variability in hypnotic susceptibility as a function of time of testing. And this may indicate the presence of so-called ultradian cycles. In essence, there may be times of the day or night that subjects are most susceptible and least susceptible to hypnotic suggestions. Also, these peaks were preceded and followed by peaks in imaging ability as assessed by the Vividness of Visual Imagery Questionnaire.

What are the implications of these findings? From a practical point of view, individuals who are day persons may not be so easily hypnotized



at night. Similarly, night persons may be more difficult to hypnotize during daytime hours. While the difference in performance on the tests used to assess susceptibility was not extreme (usually 1 or 2 points on a 12-point scale), this may be sufficient to make a difference in certain situations involving the use of hypnosis in therapy or laboratory research. Thus, professionals who use hypnosis may wish to inquire as to whether their client or subject is a day or a night person. Having determined this, decisions may be influenced concerning when during the day or night hypnosis will be used.

References

- Wallace, B. (1993). Day persons, night persons, and variability in hypnotic susceptibility. *Journal of Personality and Social Psychology*, 64, 827-833.
- Wallace, B., & Kokoszka, A. (1995). Fluctuations in hypnotic susceptibility and imaging ability over a 16-hour period. *International Journal of Clinical and Experimental Hypnosis*, 43, 20-33.
- Benjamin Wallace, Ph.D., Department of Psychology, Cleveland State University, Cleveland, OH 44115, USA

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Does catalepsy deepen a trance state?

(Henriette Walter)

Catalepsy is often referred to as a trance deepening phenomenon. In educational seminars we learn and experience that, for instance, an arm catalepsy elicits trance deepening. We wanted to verify if this subjective experience correlates to an objectively measurable brain function change. We used EEG Mapping in 20 right handed healthy volunteers (15 females and 5 males) aged 23-46 (mean 30 years), who had been found to be well hypnotizable on the Stanford Hypnotizability Scale (form C). Statistical probability maps based on power spectral analysis of a 3-minute R-EEG demonstrated during induction a decrease of total power as well as of absolute delta-, theta-, alpha 1- and beta-power. During arm catalepsy (first right arm and then left arm), total power was attenuated locally over central and frontal regions. Absolute power also decreased

Also, very little is known about the possible role of personality traits such as hypnotizability. In an attempt to bring more clarity to these issues we conducted two studies with similar investigation procedures.

Methods: In both studies, 15 high and 15 low hypnotizable healthy subjects selected using the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS:A) were randomly assigned to 1) a guided imagery group, which received instructions to imagine the cells of their immune system becoming increasingly active and efficient, 2) a relaxation group, which received no instructions regarding their immune system, and 3) a control group, which waited passively for the same amount of time. All 60 subjects were studied on 3 investigation days 1 week apart. Study 1 investigated changes in monocyte chemotaxis (MC) and LPR to three mitogens: PHA, Con A, and PWM, while Study 2 investigated changes in NKCA. The questions we wished to address were 1) whether there would be any brief changes in immune function, 2) whether cellular immune function would increase over the investigation period, 3) whether there would be differences between the effects of immune specific guided imagery and relaxation, and 4) whether any differences would be found between the immune responses of high and low hypnotic susceptible subjects.

Results: (1) The results showed similar patterns of brief decreases in LPR and NKCA immediately after intervention on all investigation days, while increases in MC were found in both intervention groups on day 1, with no changes observed on the following investigation days. (2) There were generally no changes in pre-intervention LPR and NKCA throughout the investigation period. (3) The results also showed that the immune responses of the guided imagery and the relaxation groups were similar for all immune parameters measured. While MC and LPR did not change in the control group in Study 1, the control group in Study 2 exhibited changes in NKCA similar to those of the two intervention groups. (4) Highly hypnotizable subjects in both intervention groups exhibited greater decreases in NKCA after intervention, while low hypnotic

susceptible subjects in the control group displayed greater decreases in NKCA than the high hypnotizable subjects.

There are several inconsistencies between the results of the limited number of investigations studying effects of psychological intervention on immune function. These differences may in part be explained by differences in methodology, time intervals between blood sampling, and subject characteristics such as age, health, and hypnotic susceptibility.

References

- Zachariae, R., Hansen, J.B., Andersen, M., Jinquan, T., Petersen, K.S., Simonsen, C., Zachariae, C., & Thstrup-Pedersen, K. (1994). Changes in Cellular Immune Function after Immune Specific Guided Imagery and Relaxation in High and Low Hypnotizable Healthy Subjects. *Psychotherapy and Psychosomatics*, 61(1-2), 74-92.
- Robert Zachariae, Ph.D., Institute of Psychology, University of Aarhus, Asylvej 4, DK-8240 Risskov, Denmark.

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Autonomic changes during hypnosis

(Giuseppe De Benedittis)

Hypnosis has been generally considered a condition characterized by a reduced sympathetic tone and an enhanced parasympathetic activity, a physiological state which is comparable to the relaxation response. Physiological investigations of hypnosis showed that this state is associated, at least in part, with decreased heart rate, respiratory rate and blood pressures, suggesting an involvement of the autonomic nervous system (ANS), and in particular of the parasympathetic nervous system.

Yet, despite the relevance of this research area, previous studies have been inconclusive, since the ANS has proved to be rather elusive for study purposes in dynamic conditions, because of the inadequate sensitivity of most tools used and the various interactions between the two efferent systems.

Our research group, in collaboration with the Department of Bioengineering of the Politecnico

and the S. Raffaele Hospital of Milan, has been studying the relationships between hypnosis and the autonomic nervous system (ANS) and has recently published the results (DeBenedittis, et al., 1994).

We have utilized a novel technique, the spectral analysis of beat-to-beat variability in electrocardiography as a simple, non-invasive method to analyze sympatho-vagal interaction in man. The electrocardiogram (ECG) is analyzed with an automatic autoregressive modelling algorithm to provide a quantitative estimation of R-R interval variability by the computation of power spectral density. Two major peaks are recognizable in this spectrum: a low-frequency peak (LF, ~ 0.1 Hz), related to the overall autonomic activity (ortho + parasympathetic) and a high-frequency peak (HF, ~ 0.25 Hz), representative of the vagal activity. The LF/HF ratio is an index of the sympatho-vagal interaction.

This technique has been applied to 10 healthy volunteers (5 high and 5 low hypnotizable subjects; SHSS: C) during wake and neutral hypnosis in a randomized order, using a computer-assisted electrocardiograph.

Preliminary results showed that hypnosis affects heart rate variability, shifting the balance of the sympatho-vagal interaction toward an enhanced parasympathetic activity, concomitant with a reduction of the sympathetic tone. A positive correlation between hypnotic susceptibility and autonomic responsiveness during hypnosis was also found, with high hypnotizable subjects showing a statistically significant increase of the vagal efferent activity greater than low hypnotizables.

In sum, the present results support the notion that the relaxation response, spontaneously observed in neutral hypnosis and in other discrete states of consciousness, is likely to be associated with a functional reorganization of the autonomic balance, in terms of parasympathetic hyperactivity and/or reduced sympathetic tone.

In recent months, our work has focused also upon clinical research, and particularly, on the use of hypnosis in treating dystonia. I gave a lecture on this topic at the 13th International Congress of Hypnosis (Melbourne, Australia, August

1994).

Dystonia is a syndrome dominated by involuntary, sustained muscle contractions frequently causing twisting and repetitive movements, or abnormal postures that may be sustained or intermittent. Common examples of focal dystonia include blepharospasm, oromandibular dystonia, writer's cramp and, most commonly, spasmodic torticollis or "idiopathic cervical dystonia" (ICD). Even though today most neurologists do not consider ICD to be a psychogenic disorder, but rather a neurological disorder, on the other side, more recent psychoanalytic studies emphasize the role of psychodynamics and personality patterns in ICD patients. Dystonia and particularly ICD are neuromuscular disorders extremely resistant to most therapies (physical, medical and surgical). More recently, the injection of botulinum toxin into cervical muscles has gained a widespread popularity as treatment of choice for focal dystonias and spasmodic torticollis. However, the treatment is symptomatic only, significant side effects are not infrequent, and the outcome is equivocal.

Torticollis is also one of the most difficult problems to treat with hypnosis. Anecdotal reports of successful treatment of ICD with hypnosis have been published.

The author reports 4 cases of ICD successfully treated with hypnosis, two of them in combination with EMG-Biofeedback. In all cases psychogenic causes were involved. Denial, suppressed aggressiveness, somatization and avoidance learning represent some frequent, defense mechanisms observed in these patients. Obsessive-compulsive patterns were most common in our group of patients, providing additional support for the theory of a link between basal ganglia related involuntary movement disorders and psychiatric disorders, namely obsessive-compulsive disorders.

Because of the risk of psychotic breakdown, classic hypnoanalytic approach with insight therapy was discarded in favor of a hypno-behavioral model. Postural hypnosis (i.e., hypnosis in standing position) was successfully employed to counteract and minimize muscle spasms due to postural reflexes.

Hypnotic strategies included hierarchical desensitization, sensory-imaging conditioning, ego-boosting suggestions, combined with hypnosis-facilitated differential muscle retraining.

In two cases, the hypnotic approach fostered the EMG-biofeedback training to better re-equilibrate the neck muscles' unbalance and to differentially re-train the affected muscles. Though the hypnotherapeutic process was usually gradual and slow, taking several months to induce and stabilize significant changes, immediate and long-term results were good-to-excellent in all cases, with marked reduction of the torticollis and the hypertrophy of the neck muscles as well as a reduced interference in normal patterns of daily living.

In conclusion, the present study demonstrates that hypnosis, alone or combined with EMG-biofeedback, may be a useful therapeutic tool in the treatment of idiopathic cervical dystonia.

References

- DeBenedittis, G., Cigada, M., Bianchi, A., Signorini, M. G., & Cerutti, S. (1994). Autonomic changes during hypnosis: a heart rate variability power spectrum analysis as a marker of sympatho-vagal balance. *International Journal of Clinical and Experimental Hypnosis*, 42 (2), 140-152.

Giuseppe De Benedittis, M.D., Ph.D., Università degli Studi di Milano, Centro per lo Studio e la Terapia del Dolore, Via F. Sforza 35, 20122 Milano, Italy

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Hypnotizability in Bulimic Patients

(Manfred M. Fichter)

After Pierre Janet called attention to the effectiveness of hypnotic forms of treatment for eating disorders almost 80 years passed until the first experimental studies on this issue. Existing clinical evidence and studies lead us (Kranhold, Baumann, & Fichter, 1992) to the formulation of the following hypotheses: Bulimic patients have higher dissociative abilities and a higher hypnotizability than healthy controls. In addition, it was investigated whether the two groups (bulimics vs healthy controls) differed in specific

hypnotic phenomena. Thirdly the hypothesis was tested that self-ratings of the hypnotic phenomena were in agreement with the observer ratings.

The patient group consisted of 15 persons with bulimia nervosa according to DSM-III-R criteria who were consecutively admitted to the hospital for behavioural medicine Klinik Roseneck in Prien, Germany. The control group consisted of 15 healthy females; they were assessed in an unstructured interview and with questionnaires (Eating Disorder Inventory (EDI), and SCL-90-R) and persons who had scored above a certain threshold were excluded. The control group was comparable to the patient group concerning age and education. Hypnotizability was measured with the German version of the Harvard Group Scale of Hypnotic Susceptibility, Form A (HGSHS: A).

A comparison between the bulimic and the control group showed a significant difference in the scale measuring hypnotizability (U-test, two-tailed, $p < 0.05$): a) bulimics ($N = 15$): mean = 7.1, SD = 3.1; b) control persons ($N = 15$): mean = 4.5, SD = 2.5. Only three of 15 control persons showed scores of 7 and above (high-medium or high hypnotizability). In comparison this was the case in nine out of 15 bulimic patients ($\chi^2 = 3.5$; $df = 1$; $p < 0.10$). Concerning specific items there was a significant difference at the 5 % level for two items (finger lock and inhibition). An additional item (arm rigidity) showed a trend for differences between groups (10 % level). These three items all belong to the group of challenge items. Like Barabasz (1991) we did not find higher score for bulimics in the items of cognitive and perceptual response which require strong ability for hypnotic experience and dissociation. For expert rating, hypnotic sessions were recorded on video tape and rated thereafter. Results indicate a high agreement between self and expert scoring.

Basically all three hypotheses were substantiated by our findings. In agreement with Petinati et al. (1985) a higher hypnotizability was found in bulimic patients. This finding raises a number of questions concerning the etiology of eating disorders (dissociative abilities, conformity with social norms resulting from higher sug-

gestability). Results also are of relevance for huger conceptualisations of treatment for bulimic eating disorders.

References

- Barabasz, M. (1991). Hypnotizability in Bulimia. *International Journal of Eating Disorders*, 10, 117-120.
- Kranhold, C., Baumann, U., Fichter, M. M. (1992). Hypnotizability in Bulimic Patients and Controls. *European Archives of Psychiatry and Clinical Neuroscience*, 242, 72-76.
- Pettinati, H. M., Home, R. L., & Staats, J. M. (1985). Hypnotizability in patients with anorexia nervosa and bulimia. *Archives of General Psychiatry*, 42, 1014-1016.

Manfred M. Fichter, Prof.Dr., Klinik Rosenneck, Am Rosenneck 6, 83209 Prien, Germany

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The Second International Symposium on Suggestion and Suggestibility: Cognitive Processes and Behaviour, Rom, 26 - 29 October 1994

(Vladimir Gheorghiu)

This symposium, sponsored by the Università di Roma La Sapienza and the Consiglio Nazionale delle Ricerche, was the second one of the international conventions on suggestive phenomena (Gheorghiu et al., 1989). With representatives from social, cognitive, clinical, and forensic psychology, and psycho-physiology the program covered the following themes:

1. Theoretical issues (with D. Fourie, University of South Africa, Pretoria; V. Gheorghiu, University of Gießen; J. Kirsch, University of Connecticut, Stor; L. G. Lundh, Stockholm University; V. Ruggieri, Università di Roma). The discussions dealt with definitions, taxonomy, and the role of suggestive actions from the perspective of cognitive, systemic and psycho-physiologic approaches. The connections between placebo-effects and suggestion/hypnosis were discussed.
2. Suggestibility: memory and imagination processes (with G.H. Gudjonsson, University of

London; H. Hembrooke, Cornell University, Ithaca; S. J. Lynn, Ohio University, Athens; F. Marucci, V. De Pascalis, Università di Roma; F. Strack, University of Trier; P. Sheehan, University of Queensland, Brisbane). These contributions dealt with forms of memory distortion that occur under the influence of indirect and implicit suggestion.

3. Social and cognitive aspects of suggestion and suggestibility (with K. Fiedler, University of Heidelberg; V. Gheorghiu, E. Koch, W. Pieper, H. Fialkowski, University of Gießen; R. F. Pohl, University of Trier; E. Schwanenborg, University of Frankfurt/Main). The various themes of this section included questions about the importance of suggestion as a social influence, the influence on social judgements, the effects of feedback on "hindsight" bias, and the changes of perception of warmth and motoric actions caused by suggestion.
4. Psycho-physiology of suggestion and suggestibility (with V. De Pascalis, F. Marucci, Università di Roma; P. Jasiukaitis, D. Spiegel, Stanford University; V. Ruggieri, Università di Roma; W. J. Ray; Penn State University; I. Wickramasekera, Eastern VA Medical School, Norfolk). In this section results of research with primarily psycho-physiological aspects of suggestive phenomena under hypnotic conditions were presented.

General problems of suggestion research were discussed, too. It is intended to shorten the interval between these interdisciplinary symposia and to organize such conventions also within national and international psychological congresses.

References

- Gheorghiu, V., Netter, P., Eysenck, H.J., & Rosenthal, R. (Eds.) (1989). *Suggestion and suggestibility: Theory and research*. Berlin: Springer.

Vladimir Gheorghiu, Prof.Dr., Institut für empirische und angewandte Sozialforschung, Universität Gießen, Otto-Behagel-Str. 10, 35394 Gießen

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A further case of the misuse of hypnosis in a police investigation

(Hamilton B. Gibson)

Mr. E.O. Browning who was sentenced to life imprisonment for murder in October 1989 appealed against conviction in 1994. The main grounds for appeal were that the chief witness for the Prosecution had been hypnotized and had made certain statements in the hypnotic interview that were damaging to the Crown's case, but this was not made known to the Defence at the trial. They were not informed that he had been hypnotized, or of the nature of the statements that he had made. When the Defence were granted leave to appeal, the police asked me to study the videotape of the hypnosis session and to comment on it. I did this and gave them a fairly lengthy Report. Later, I was asked to comment on a criticism of my Report which had been made by the expert witness hired by the Defence, Dr. Graham Wagstaff. Later still, after an interview with the Q.C. for the Crown, I was asked to write an addendum to my commentary.

This was the notorious "motorway murder case". A heavily pregnant woman was abducted and stabbed when she was seeking help for her broken-down car at a roadside telephone. A motorist (who happened to be an off-duty policeman) had reported that he had seen another driver approach the woman at the roadside telephone. Partly because of this witness' statement, they tracked down Mr. Browning and charged him with murder.

A lot had depended on the police witness identifying the car that Mr. Browning was driving, and in the hope of improving their evidence, the police had their witness subjected to a hypnosis session that was largely devoted to endeavouring to get him to remember the license plate of the car. He came up with a definite registration number during this session, and gave a description of the car. Later research showed that no such license plate existed, and his description of the car did not quite fit that which Mr. Browning drove, but all this was not revealed to the Defence at the time of the trial.

An extraordinary feature of this case was that

my evidence was not at all favourable to the Crown's case although I was engaged by them, and Dr. Wagstaff's evidence was not very favourable to the Defence, although he was hired by them! I held that the police witness was probably influenced by the hypnosis, and hence dreamed up a totally fictitious license number (which he would have been unlikely to do in a normal waking state of consciousness), and I further maintained that if a witness has been hypnotized the evidence he would give subsequently might be contaminated. Dr. Wagstaff held that the witness had not really been influenced by "hypnosis" (note the inverted commas) and hence the hypnosis session was entirely irrelevant to the case. This, of course, reflected our different theoretical positions. In this situation, both Crown and Defence decided not to call upon their expert witnesses to give evidence. The appeal against convictions was allowed, the judges deciding that if at the original trial the jury had been allowed to hear all the relevant evidence they would probably not have brought in a verdict of "Guilty".

I hope that this case will be a salutary lesson to the police not to mess about with having witnesses hypnotized to try to improve their memories. They have been warned by the Home Office of the dangers that attend this practice. I, together with other colleagues in the BSECH, spent about 8 years trying to get the Home Office to formulate sensible guide-lines for the police - which they eventually did in 1988. These guidelines are not mandatory, and it is left to the discretion of individual police forces just whether they resort to hypnosis or not. We are currently pressing the Home Office to set up a panel of experts knowledgeable in hypnosis who could advise the police with respect to any one case. It is unfortunately true that many professionals, well qualified in medicine or psychology, who may use hypnosis quite effectively in their therapeutic practice, have little real knowledge about how memory is affected by hypnotic procedures, and how they may unwittingly cue witnesses during a hypnotic interview. Such individuals may undertake to hypnotize witnesses for the police very readily, unaware of their own limitations. What is needed is an independent



committee of professionals who, by study and experience, are qualified to advise as to when hypnosis should and should not be used in a forensic context, and to see that it is always employed in an appropriate and responsible manner.

Hamilton B. Gibson, Ph.D., 10 Manhattan Drive, Cambridge, CB4 1JL, England

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The experience of hypnosis and attitudes towards hypnotherapy

(Graham F. Wagstaff)

A number of studies have indicated that subjects who have never experienced hypnotic induction often possess inaccurate and negative preconceptions about the experience of hypnosis, such as suspicions and anxieties about loss of awareness and control in the hypnotic 'state'. Consequently, having experienced hypnotic induction, subjects can be surprised to find that their experiences of hypnosis are not as unusual or exaggerated as expected. We predicted therefore that, prior to an experience of hypnotic induction, potential clients might be more apprehensive about seeking help through what are presented as 'state' or 'trance' approaches to hypnotherapy, than 'non-state' or cognitive-behavioural approaches to hypnotherapy that do not imply or assume the existence of a state or 'trance' during hypnosis.

To investigate this possibility, we assigned subjects, who had no previous experience of hypnosis, to two groups. Both groups received an identical three part questionnaire and a standard hypnotic induction procedure; the only difference being that one group was required to fill out the questionnaire after receiving a standard hypnotic induction procedure, whereas the other received the questionnaire before the hypnotic induction. Part one of the questionnaire gave a brief, general description of each of five methods of therapeutic treatment. These were, hypnotherapy from a state perspective, hypnotherapy from a cognitive-behavioural perspective, spiritual healing, and medical treatment. Part two of the questionnaire consisted of twel-

The interaction of hypnotic ability and neuroticism as risk factors for psychopathology and pathophysiology according to the High Risk Model of Threat Perception

(Ian Wickramasekera)

The High Risk Model of Threat Perception (HRMTP) was first proposed in 1979. The 7 multidimensional risk factors of the model are composed of predisposers, triggers, and buffers. Predisposers are (1) high or low hypnotic ability, (2) catastrophizing and (3) high explicit neuroticism or high implicit neuroticism (repressors). Triggers are (4) major life changes, and (5) minor hassles. Buffers are (6) number and level of satisfaction with support systems, and (7) coping skills.

The model to date has been empirically shown to identify people apparently at risk for (1) high levels of subjective distress in response to cognitive stress, (2) strong sympathetic reactivity (e.g. EDR response) and slow recovery in response to cognitive stress; (3) to predict high levels of EDR reactivity to cognitive stress, where high hypnotic ability and high neuroticism coincide, even when there is no subjective or conscious (verbal report) perception of distress; (4) to predict moderate obesity measured by B.M.I.; (5) EEG defined psychophysiological insomnia, with pathophysiology (sleep apnea etc.) excluded; (6) the frequency of somatic vs. psychological symptoms in chronic somatizers; (7) low hypnotic ability and non-organic chest pain in a primary care medical setting; (8) morbid obesity and low hypnotic ability in a medical surgical setting; (9) chronic pain in somatizers; (10) chronic pain in anesthesiology pain clinic; (11) cardiac surgery patients who scored in the 'mid range' stabilized more quickly in the intensive care unit than patients who scored 'high or low' in hypnotic ability.

The HRMTP proposes that the essence of 'dissociation' is the coincidence of high hypnotic ability and high neuroticism, which can generate and amplify psychopathology, somatization

and perhaps eventually pathophysiology. A hundred years ago, Charcot proposed, and Bernheim opposed, the theory that high hypnotic ability generated disease. I have proposed that it is not hypnotic ability per se but its interaction with other high risk factors, particularly neuroticism, that can generate disease.

References

- Greenleaf, M., Fisher, S., Miaskowski, C., & DuHamel, K. (1992). Hypnotizability and recovery from cardiac surgery. *American Journal of Clinical Hypnosis*, 35(2), 119-128.
- Wickramasekera, I. (1979). A model of the patient at high risk for chronic stress related disorders: Do beliefs have biological consequences? Paper presented at the Annual Convention of the Biofeedback Society of America, San Diego, CA.
- Wickramasekera, I. (1986). A model of people at high risk to develop chronic stress related somatic symptoms: Some predictors. *Professional Psychology: Research and Practice*, 17(5), 437-447.
- Wickramasekera, I. (1988). *Clinical Behavioral Medicine: Some concepts and procedures*. New York: Plenum.
- Wickramasekera, I. (1993). Assessment and treatment of somatization disorders: The High Risk Model of Threat Perception. *Handbook of Clinical Hypnosis* (pp. 587-621). Washington, DC: American Psychological Association.
- Wickramasekera, I. (1994). Psychophysiological and clinical implications of the coincidence of high hypnotic ability and high neuroticism during threat perception in somatization disorders. *American Journal of Clinical Hypnosis*, 37(1), 22-33.
- Wickramasekera, I. (1995). Somatization concepts, data, and predictions from the High Risk Model of Threat Perception. *Journal of Nervous and Mental Disease*, 183(1), 15-23.
- Ian Wickramasekera, Ph.D., Eastern Virginia Medical School, Norfolk, Virginia 23507, USA

from ISH-Newsletter, 18(1), May 1995

ve disorders for which individuals might seek therapeutic treatment through hypnosis; e.g. anxiety, addictive behaviour, insomnia, pain and stress. Subjects were asked to rate how likely they would be to seek treatment through each of the five treatments, if they had these disorders. Part three of the questionnaire consisted of a series of questions designed to measure people's attitudes towards hypnotherapy and hypnosis, and some characteristics hypothesized to correlate with such attitudes.

The results indicated, as predicted, that subjects who had not experienced hypnotic induction before the questionnaire, expressed a preference for the cognitive behavioural approach over the state approach in seeking treatment; in fact, unlike the cognitive behavioural approach, the state approach also fared poorly against counselling and medical treatment. However, these differences did not emerge for those who had experienced hypnotic induction before. Furthermore, the questionnaire responses gave some support to the view that the experience of hypnotic induction tends to change attitudes toward hypnotherapy from a state approach partly by decreasing suspicions about hypnosis and worries about being controlled. Indeed, low hypnotic depth was related to a tendency to dislike being controlled by others, and concern about appearing easily influenced.

If these results have any generality, from an applied 'recruiting perspective', they would seem to support the view that the public stereotype of hypnotherapy from a classic 'state' perspective may actually be more off putting to potential clients than hypnosis presented from a non-state perspective. However, the experience of a standard hypnotic induction/relaxation procedure appears to eliminate this discrepancy.

References

- Jan, N. & Wagstaff, G.F. (1994). Attitudes towards state and cognitive-behavioural approaches to hypnotherapy before and after hypnotic induction. *Contemporary Hypnosis*, 11, 2, 66-70.
- Graham F. Wagstaff, Ph.D., Department of Psychology, University of Liverpool, P.O. Box 147, Liverpool, L37 1BX, England

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There is growing evidence that dissociation is a common response to traumatic stress

(David Spiegel)

While this issue has most frequently been raised in the literature regarding the controversy over the relationship between childhood sexual abuse and dissociative disorders in adulthood, there is a new body of evidence suggesting that dissociative responses are not uncommon among individuals suffering trauma in adult life. These studies build on work suggesting that the hypnotizability of individuals with post-traumatic stress disorder was higher than that of other patient populations and higher than normals. Recently, our group published research conducted with survivors of the Oakland-Berkeley, California fire storm, the major disaster in which more than 3000 homes were destroyed, 24 people were killed, and there was \$5 billion worth of damage. Using our Stanford Acute Stress Reaction Questionnaire which contains dissociative and anxiety items, we found a significant relationship between dissociative symptoms and exposure to the fire storm. In addition, dissociative symptoms were predictors of subsequent PTSD symptoms. This and related studies were used to support the inclusion of a new diagnostic category, Acute Stress Disorder, in the DSM-IV. This disorder can occur within a month of a traumatic stressor and involves three of five dissociative symptoms: being in a daze, de-realization, depersonalization, numbing, and amnesia along with one each of the classic PTSD symptoms of intrusion, avoidance, and hyperarousal. This and related work indicates that dissociative phenomena occurred during and in the immediate aftermath of trauma and may be predictive of later post-traumatic stress disorder.

References

- Koopman C., Classen C., & Spiegel D. (1994). Predictors of Post-Traumatic Stress Symptoms Among Survivors of the Oakland/Berkeley California Fire Storm. *American Journal of Psychiatry*, 151, 888-894

David Spiegel, M.D., Dept. of Psychiatry and Behavioral Sciences, Stanford University,

School of Medicine, Stanford, CA 94305, USA, dspiegel@leland.Stanford.edu

from ISH-Newsletter, 17(2), November 1994

Clinical hypnosis as an empirically validated procedure

(Irving Kirsch)

Clinical hypnosis, used as an adjunct to cognitive-behavioral psychotherapy, is on its way to becoming an "empirically validated treatment," as that term is defined by a task force of the American Psychological Association Division of Clinical Psychology.

The effects of adding hypnosis to cognitive behavior therapy was evaluated in a meta-analysis that will soon be published as a "special feature" in the *Journal of Consulting and Clinical Psychology* (Kirsch, Montgomery, & Sapirstein, in press). The results indicated that the addition of hypnosis substantially enhanced treatment outcome, such that the average client receiving cognitive-behavioral hypnotherapy showed greater improvement than at least 70 percent—and perhaps as much as 90 percent—of clients receiving nonhypnotic treatment. Effects seemed particularly pronounced for treatments of obesity, especially at long term follow-up, indicating that unlike those in nonhypnotic treatment, clients to whom a hypnotic inductions had been administered continued to lose weight after treatment ended.

These results were particularly striking because of the few procedural differences between the hypnotic and non-hypnotic treatments. In many cases, the only difference was the use of the word "hypnosis." These were studies in which both treatments included relaxation instructions that were termed "hypnotic inductions" in the hypnotic treatment. The effect size in these treatments were as large as those in which there were other differences between the hypnotic and nonhypnotic treatments.

The task force Criteria for Empirically Validated Treatments included two requirements that were not followed in many of the studies we reviewed. These were that the studies be conducted with treatment manuals and that the charac-

teristics of the client samples be clearly specified. Nevertheless, hypnosis seems to meet the stated criteria because only two good studies are needed for a treatment to be considered empirically validated.

Our meta-analysis was impeded by the failure to report standard deviations in many of the studies. Because of this, we had to estimate many of the effect sizes using procedures that are not as reliable as calculating them directly from means and standard deviations. The average effect size in the studies reporting means and standard deviations was .47 standard deviations, whereas that of studies in which standard deviations were not reported was 1.87.

The further acceptance of hypnosis as an adjunct to therapy can be promoted by more outcome studies of the kind we reviewed. These studies should be conducted with treatment manuals that can be made available to clinicians and researchers. Journal editors should require that all reports of outcome studies include clear specification of client samples and means and standard deviations on all measures for each treatment and control condition.

References

- Kirsch, I., Montgomery, G., & Sapirstein, G. (1995). Hypnosis as an adjunct to cognitive behavioral psychotherapy: A meta-analysis. *Journal of Consulting and Clinical Psychology*, 63(2), 214-220.
- Irving Kirsch, Ph.D., Dept. of Psychology, University of Connecticut, U-20, 406 Babbidge Road, Storrs, CT 06269-1020, USA

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The Stanford Laboratory of Hypnosis Research 1957 - 1979

(Ernest R. Hilgard)

The Stanford Laboratory of Hypnosis Research had a 20-year history, 1957-1979. Founded originally in 1957, with the assistance of André Weitzenhoffer, it continued under my directorship after he left in 1962. Although I retired from active duty as a professor in 1969, when I became professor-emeritus, I retained my office and laboratory. I continued to serve as director of the

laboratory for another 10 years, engaging in active research with a laboratory staff, including post-doctoral fellows, supported by research grants, chiefly from the National Institute of Mental Health. Although the active laboratory was closed in 1979, since then I have continued to do some writing on hypnosis, retaining office space at Stanford University but no longer with a continuing research program.

During the period of active research a number of topics were investigated, such as the measurement of aptitude for hypnosis, as represented by the Stanford Hypnotic Susceptibility Scales; efforts at determining the correlates of measured hypnotic responsiveness, including changes with age; and correlation with aspects of personality, evident outside hypnosis. A major program dealt with the reduction of pain through hypnotic interventions, and the physiological correlates of the suggested analgesia. A later program was concerned with the dissociations found within hypnosis.

Many of the investigations had a bearing on the contributions of hypnosis research to general psychology. The aim was to show that hypnotic phenomenon should not be treated as something pathological, but that such investigations ought to find a place among the standard topics of psychology, along with perception, learning, memory, emotion, and the like.

Ernest R. Hilgard, Ph.D., Dept. of Psychology, Stanford University, Stanford, CA 94305, USA

from ISH-Newsletter, 16(2), February 1994

Indexing the subjective reality of hypnotic phenomena

(Kevin M. McConkey)

Kevin McConkey of the University of New South Wales, Sydney, Australia, is currently undertaking a project entitled "Indexing the subjective experience of hypnosis" which is funded by Australian Research Council. This project aims to develop and use an objective index of the subjective reality of the hypnotic experience. Much of what we know about hypnosis depends on the verbal reports of hypnotized people,

McConkey's project is seeking to index the subjective reality of hypnotic phenomena by comparing the response of hypnotized subjects to real, that is externally presented, and suggested, that is internally generated, experience. The methods being developed in the project and the findings of the project will provide information not only about hypnosis, but also about ways of understanding the complex area of private subjective experiences. Aspects of the theoretical background of this project can be found in:

References

- McConkey, K.M. (1991). The construction and resolution of experience and behaviour in hypnosis. In S.J. Lynn and R.W. Rhue (Eds.), *Theories of hypnosis: Current models and perspectives* (pp. 542-563). New York: Guilford.
- Kevin M. McConkey, Ph.D.; *School of Psychology, University of New South Wales; P.O. Box 1; Kensington, New South Wales 2033; Australia.*

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Hypnosis and the immune system

(Karen Olness & Howard Hall)

For well over a decade, we have been interested in research related to hypnosis and the immune system. Our work has involved children and adolescents. We have looked at both humoral and cellular immunity. Our progress is often stymied by lack of funds but over time we have completed a number of projects which stimulate us to go on. We have found evidence in control settings for intentional control (cyberphysiologic strategy) of specific immune functions. We do not presume that these have clinical applications at this time. However we regard our work as stepping stones to eventual clinical trials.

E.g., in a study of voluntary immunomodulation, subjects were assigned to one of three treatment groups. Group A (Control) rested for 30 minutes between two samplings of blood and saliva. Group B (Experimental I) practiced a cyberphysiologic strategy for 30 minutes between the two samplings of blood and saliva. Group C (Experimental II) received pre-training, over a two week period, in the use of cyberphysiologic strategy intended to increase neurophil

adherence. Then, during an experimental session, these subjects practiced a 30 minute cyberphysiologic strategy. Blood and saliva samples were also collected from group B and C before and after the 30 minute exercise. Subjects in each group returned to repeat their exercise in a second session the following week.

Statistical evaluation of the pre-to-post intervention revealed significance for neurophil adherence change. Follow-up analysis revealed that only subjects with prior cyberphysiologic training (group C) were able, by the second session, to induce a significant increase in neurophil adherence. No correlations to hypnotizability were found.

References

- Hall, H., Minnes, L. & Olness, K. (1993). The psychophysiology of voluntary immunomodulation. *International Journal of Neuroscience*, 69, 221-234.
- Hall, H., Minnes, L., Tosi, M. & Olness, K. (1992). Voluntary modulation of neurophil adhesiveness using a cyberphysiologic strategy. *International Journal of Neuroscience*, 63, 287-297.
- Olness, K., Culbert, T. & Uden, D. (1989). Self-regulation of salivary immunoglobulin A by children. *Pediatrics*, 83(1), 66-71.

Karen Olness, M.D. & Howard Hall, Ph.D., *Rainbow Babies and Childrens Hospital, 2074 Abington Road, Cleveland, Ohio 44106, USA*

from *ISH-Newsletter*, 16(2), February 1994

Memory and hypnosis

(Peter W. Sheehan)

Memory is a fascinating phenomenon and one of the most intriguing features of it is its proneness to distortion. When most of us try and remember things the probability of our memories being correct is actually not very high. It is thus a very important area of hypnosis research to examine whether memories are more or less distorted in hypnosis than they are in the waking state. The data from such research are relevant to our understanding of memory itself, but also to our grasp of how useful hypnosis might be in the forensic setting. It is in the legal setting that memories have to be trusted and we look to find

testimony that we can believe in is correct. In that setting, it is important for us to know whether hypnosis helps or hinders recall and how much hypnotic memories can, in fact, be trusted. Memories are not all that trustworthy out of hypnosis and it is prudent to know in hypnosis whether that situation is better or worse.

My research for many years now has focused on memories in hypnosis - how accurate they are, and how confident we can be that they are correct. The main objective of the work as a whole has been to study the factors and processes affecting people's memory of events when they are questioned about these events in a variety of ways that are misleading, or suggestive. The special thrust of the research has been to examine the effects of suggesting misleading information in three quite different ways - by subtle cueing, by explicit suggestion (creating a pseudomemory), and via leading questions. The range of studies conducted has intentionally paralleled situations which occur in actual investigative settings where witnesses are asked about what they have seen previously. Particular focus has been sustained throughout the work on the influence of level of susceptibility, and state induction (hypnosis, and waking), these parameters being included in nearly every major experiment that has been conducted over a period of seven years. The advantage of programmatic work of this kind is that we can take a developmental look at what is happening and we can examine modalities and patterns of differences when methods of communicating information are varied and different procedures for retrieving information are adopted.

The work has been conducted in three phases. Phase 1 introduced misleading information through application of procedures from the paradigm of research developed by Elizabeth Loftus. Phase 2 was concerned with investigation of a range of factors affecting pseudomemory, with particular emphasis on rapport. Phase 3 dealt with the effects of leading questions. All three phases have focused on the analysis of memory distortion in (and out of) hypnosis.

One of the factors showing strong cross situational influence is the level of a subject's

susceptibility to hypnosis. It is very clear from the program as a whole that a major factor affecting how memories are reported in hypnosis is the level of suggestibility of the person who is doing the reporting, greater suggestibility leading to increased memory distortion. The state of consciousness in which subjects are placed when they are exposed to false information is less influential but nevertheless important, and particularly so, in my opinion, where pseudomemories are concerned. Overall, the relationship between memory distortion and hypnosis is most clear-cut when pseudomemories are implanted through suggestion, and least clear-cut when false information is conveyed through leading questions. Very clearly, it matters also just how the incorrect information is suggested as to whether memory in hypnosis will be very distorted or not, and the degree of distortion seems to be much more evident when false information is given in hypnosis rather than out of it.

Research in hypnosis definitely tells us something about the nature of memory distortion. We know, for example, memories are not overlaid completely by suggested events - this is the case both in and out of hypnosis. The data from hypnosis research confirm that when false information is suggested memories are affected and become very difficult to retrieve. Memory can be significantly distorted both in and out of hypnosis, but memories in hypnosis are something of a special problem because hypnotic subjects often become easily convinced they are correct in what they are reporting. This is a special difficulty in the forensic setting where jurors can readily draw inferences about accuracy that are based heavily on the expressed conviction of the witness.

The fascination of memory continues to motivate me in the research, and there is still much to investigate. What effect does the format of questions have on the extent of memory distortion in hypnosis, and how much is confidence at work when we think (mistakenly) that accuracy is the issue. Rapport is also important in determining the pattern of effects in hypnosis, and this is perhaps not surprising because in hypnosis the relationship between hypnotist and subject seems to me to matter greatly.



References

- Sheehan, P.W. (1988). Memory distortion in hypnosis. *International Journal of Clinical and Experimental Hypnosis*, 36, 296-311.
- Sheehan, P.W., Green, V., & Truesdale, P. (1992). Influence of rapport on hypnotically induced pseudomemory. *Journal of Abnormal Psychology*, 101, 690-700.
- Sheehan, P.W., Garnett, M., & Robertson, R. (in press). The effects of cue level, hypnotizability and state instruction on response to leading questions. *International Journal of Clinical and Experimental Hypnosis*.
- Peter W. Sheehan, Ph.D., *The University of Queensland, Cumberae-Steward Building, Research Road, Brisbane Qld 4072, Australia*
from *ISH-Newsletter*, 16(2), February 1994

It needs a forebrain to get hypnotized

(Henriette Walter)

The Viennese tradition of research in neuropsychology, which stimulated neurology, psychiatry and psychotherapy (just think of Freud's development) is still living and provides us with an efficient cowork between the University Clinics of Neurology and Psychiatry. The research tools are no longer microscope and anatomy, but Brain Imaging Methods, able to measure functional changes in the living brain, providing data on brain blood flow as well as local EEG functions. In combination with neuropsychology these technologies can render results, completely new to current understanding of hypnosis.

In a Single Photone Emission Computed Tomography study on 41 right handed subjects we studied blood brain flow changes during hypnosis and compared it to the relaxed rest situation. We found out, that high hypnotizables (according to the Stanford Scale) - especially high hypnotizable women - underwent strong changes in their local brain blood flow. They showed a blood shift from posterior brain areas to frontal areas. Low hypnotizables - who could not experience hypnosis so intensively as the high hypnotizable group - had less frontal blood flow increase and no clear occipital decrease.

In a second step we looked at single symptoms. In a similar design as above mentioned we investigated total body catalepsy and found also a tendency to frontal activation combined with a right parietal activation. In another study we compared psychotic to hypnotic auditory hallucinations and could demonstrate a clear difference. The psychotic ones involve both hippocampi while the hypnotic hallucinations correlate with temporal and occipital activity decrease in favour of - again - a frontal increase.

In a third step we investigated different depths of hypnosis by means of Imaging EEG. Hypnosis induction resulted in a decrease of the „absolute power“, while the „relative power“ on the whole did not change. If we look at the single frequencies we see no changes in the Beta-, Delta- and Theta-waves, but we see a decrease of Alpha-1-waves and an increase of Alpha-2-waves. Deep trance was marked by a Theta-wave increase and light trance by a Delta-Theta decrease (absolute power) and an Alpha-2-wave increase together with a Beta-2-wave decrease.

Out of these results we conclude that hypnotic trance states involve activations of different, but mainly frontal brain areas. Our data suggest that hypnotic trances are states of a „cognitive“ activity marked by a decrease of the normally broad attentiveness and a selectively heightened concentration on self-awareness and association, needing a high activity of the forebrain.

References

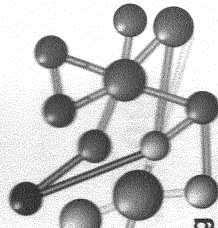
Walter, H. (1992). Hypnose: Theorien, neuropsychologische Korrelate und praktische Hinweise. Stuttgart: Thieme.

Henriette Walter, M.D., *University Clinic for Psychiatry, Währingergürtel 18-20, 1090 Wien; Austria, Henriette.Walter@akh-wien.ac.at*

from *ISH-Newsletter*, 16(2), February 1994

Mitgliedschaft in der ISH?

Apropos: Falls Sie an einer Mitgliedschaft in der International Society of Hypnosis (ISH) interessiert sind, wenden Sie sich doch bitte an die Geschäftsstelle der M.E.G. in München: Dort erhalten Sie Formulare!



Research database of hypnosis on the world wide web

<http://www.hypnosis-research.org>

Jean Holroyd, Ph.D., of the UCLA Department of Psychiatry and Biobehavioral Sciences, has developed a www homepage to be the gateway into more than 8.000 references from the clinical and research literature.

Without cost, any person anywhere will be able to download the entire database (if they have a suitable database program and huge disc storage capacity). Or they may elect to search on keywords (e.g. fibromyalgia + hypnotizability) and print out only the references relevant to their interests. Many of the references in this database came from the files assembled by Ernest Hilgard, Ph.D., at Stanford University and are not available in other reference databases like Medlars; many of them include abstracts and/or Jean Holroyd's notes of papers presented at ASCH or SCEH meetings.

The database will continue to grow as others contribute their favorite articles on hypnosis. Using a powerful database program on the UCLA server will permit scholars and clinicians sitting at their own computers around the world to enter new references with abstracts and notes. These will be coded as „unreviewed“ until they are reviewed by the Editor and become part of the permanent database. In that way, the database partakes of the unique interactive, information sharing capacities of the www, while also being protected from inappropriate non-academic material.

Holroyd, J.C. Ph.D., *Neuropsychiatric Inst., UCLA, 760 Westwood Plaza, Los Angeles, CA 90024-1310, USA. holroyd@ucla.edu*

Hypnosis Home Pages

American Society for Clinical Hypnosis (ASCH): <http://www.asch.net>

International Journal of Clinical and Experimental Hypnosis:

<http://sunsite.utk.edu/IJCEH>

International Society of Hypnosis (ISH):

<http://www.ish.unimelb.edu.au>

Milton H. Erickson Foundation: <http://www.erickson-foundation.org>

Milton Erickson Society for Clinical Hypnosis Germany (M.E.G.):

http://ourworld.compuserve.com/homepages/milton_erickson

Society for Clinical and Experimental Hypnosis (SCEH):

<http://spartan.ac.brocku.ca/~wwwsceh/>