

# AUSTRALIAN JOURNAL OF CLINICAL AND EXPERIMENTAL HYPNOSIS



---

NOVEMBER 1999

VOLUME 27 NUMBER 2

Published by the  
AUSTRALIAN SOCIETY OF HYPNOSIS

---

<i>Annual subscription rate:</i>	Australia:	Individuals	\$30.00
		Institutions and Libraries	\$45.00
	Overseas:	Individuals	\$35.00
		Institutions and Libraries	\$50.00
<i>Price per single copy: (including back copies)</i>		Individuals	\$20.00
		Institutions and Libraries	\$30.00

*Subscription inquiries to the Editor*

# AUSTRALIAN JOURNAL OF CLINICAL AND EXPERIMENTAL HYPNOSIS

---

November 1999

Volume 27 Number 2

RECOVERED MEMORIES OF ABUSE: REAL, FABRICATED, OR BOTH? Kathryn Gow . . . . .	81
THE BRAIN AND HYPNOSIS: IS THERE A CHAOTIC CONNECTION? Alison Weber . . . . .	98
HYPNOSIS AND RECURRENT MENSTRUAL HEADACHES David Howsam . . . . .	118
THE CASE OF HOW THE BOOGIE MAN DISAPPEARED Anastasia Contos . . . . .	125
DO FANTASY PRONENESS AND PERSONALITY AFFECT THE VIVIDNESS AND CERTAINTY OF PAST-LIFE EXPERIENCE REPORTS? Sonje Robertson and Kathryn Gow . . . . .	136
TREATMENT OF PTSD UTILISING CBT AND HYPNOTHERAPY Alison Lumsden . . . . .	150
A METAPHOR FOR HYPNOSIS Antonio Capafons, Ana Alarcón, and Martin Hemmings . . . . .	158
CASE NOTES . . . . .	173

**AUSTRALIAN JOURNAL OF  
CLINICAL AND EXPERIMENTAL HYPNOSIS**

Copyright © The Australian Society of Hypnosis Limited 1999

---

**EDITORIAL BOARD**

*Editor*

Barry J. Evans, PhD, University of Melbourne

*Associate Editors*

Greg J. Coman, MSc, University of Melbourne

Kathryn M. Gow, PhD, Queensland University of Technology

Kevin McConkey, PhD, University of New South Wales

Wendy-Louise Walker, PhD, Sydney

Graham R. Wicks, MBBS, DOBstRCOG, FRACGP,

Women's and Children's Hospital, Adelaide

*Abstracts Editor*

Alistair G. Campbell, MCLinPsych, Launceston

*Chief Editorial Consultant*

Graham D. Burrows, AO, KSJ, MD, ChB, BSc, DPM, FRANZCP, FRCPsych, MRACMA,  
DipMHlthSc(Clinical Hypnosis), University of Melbourne

*Editorial Consultants*

Peter B. Bloom, MD, Pennsylvania Hospital and University of Pennsylvania

Harold B. Crasilneck, PhD, PC, University of Texas Health Science Center,  
Southwestern Medical School, Dallas, Texas

Frederick J. Evans, PhD, Carrier Foundation and UMDNJ, Rutgers Medical School

Fred H. Frankel, MD, ChB, DPM, Beth Israel Hospital and Harvard Medical School

Ernest R. Hilgard, PhD, Stanford University

Martin T. Orne, MD, PhD, University of Pennsylvania

Campbell Perry, PhD, Concordia University, Montreal

Peter W. Sheehan, PhD, Australian Catholic University, Sydney

*Editorial Assistant*

June Simmons

---

**FEDERAL EXECUTIVE OF  
THE AUSTRALIAN SOCIETY OF HYPNOSIS LIMITED**

*President:* James M. Auld, BDS, MSc

*President-Elect:* Gayre Christie, PhD

*Past President:* Wendy-Louise Walker, PhD

*Federal Secretary:* Robert C. Bierman, MBBS

*Federal Treasurer:* Greg J. Coman, MSc

*Chairman — Publications:* Barry J. Evans, PhD

*Chairman — Board of Education:* Graham D. Burrows, AO, KSJ, MD

---

Manuscripts and editorial matter should be addressed to the Editor, Dr Barry Evans, at  
PO Box 592, Heidelberg, Victoria 3084. All journal business communications and  
subscriptions should be addressed to the Editor.

## **RECOVERED MEMORIES OF ABUSE: REAL, FABRICATED, OR BOTH?**

**Kathryn M. Gow**

*Queensland University of Technology*

---

This paper reviews the literature on “recovered memories.” The case for recovered memories being real and the case for recovered memories being fabricated are introduced, with the possibility that recovered memories may be true and accurate in some cases, may be true and fuzzy with respect to detail in other cases, or partially or totally fabricated in certain instances. The conclusion is drawn that, as yet, there are no certain answers as to how to distinguish true from false memories.

### **THE CASE FOR RECOVERED MEMORIES BEING REAL**

#### **The Mechanism of Repression**

One of the most controversial aspects of the debate surrounding the recovered memory controversy has been whether memories can be forgotten through the mechanism of repression (Loftus & Kaufman, 1992). The case for adults suddenly retrieving previously never remembered memories of childhood sexual abuse (CSA) and satanic ritual abuse (SRA) rests on the theory of repression. The mechanism of repression, which may underlie the possibility of adult retrieval of forgotten CSA, is ill defined (Sheehan, unpublished paper, 1997a). Olio (1994) warned there is confusion with the term “repressed,” as many clients and therapists think it means to “to forget”; whereas the distinction should be made between the possible mechanism (repression) and the existence of the phenomenon itself (psychogenic amnesia).

The existence of defence mechanisms, such as repression, to preserve the integrity of the self (Horowitz, 1976, 1986) has generally been accepted for most of this century. Janet, for example, proposed that traumatic memories, to

terrible for the mind to face, could detach, and fragments could be stored as sense memories and then, later on, resurface as multiple personalities or flashbacks or full blown stories of repeated CSA (Janet, 1889, 1907, in Kihlstrom, Glisky, & Angiulo, 1994).

“Robust repression” is a term recently invented to describe temporary, but complete, amnesia for traumatic events (see Ofshe & Singer, 1994, for the origins of this terminology). While many researchers and clinicians would argue that such robust repression does occur for normal significant life experiences (Baars & McGovern, 1995; Loftus, 1993), there is no problem in most cases when there is corroborating evidence for the event. Unfortunately, in CSA there is often no corroborating evidence.

While researchers and clinicians generally speak of repression as a mechanism, there are some who think of the act of repression as a characteristic.

### **Is Repression More of a Characteristic?**

Bruner and Postman (1947, in Reisner, 1996) labelled individuals who were neurotic and who use repression and denial as primary defence mechanisms as repressers. Repressers take a longer time to perceive words which are threatening when the stimuli are tachistoscopically presented, because they engage in “perceptual defense.” Other individuals who are neurotic, but who use intellectualisation and rationalisation as defence and perceive stimuli that are threatening more readily, are labelled as “sensitisers” (see Byrne, 1961; Eriksen, 1954). These authors reported that hysterics are repressers (high in perceptual defence and high in the use of repression as a defence mechanism, who, therefore, block out emotionally threatening material). Sufferers of obsessive-compulsive disorder (OCD) are desensitisers who are hypervigilant for threatening stimuli. OCD sufferers have also been identified as more likely to have elaborate and exotic flashbacks (Spanos, 1996) and therefore are a group worthy of further study in the FRMA (false recovered memories of abuse) forum.

Hansen and Hansen’s (1988) work with repressers (low anxiety and high defensiveness) and non-repressers (low anxiety and low defensiveness) gives us some clues as to the relationship between coping style and low accessibility of emotionally tagged memories (Davis, 1987). These researchers concluded that repressers find it more difficult to access negative emotional memories, especially where fear-associated memories are involved. Their work may explain why Davis (1987) found that, when a tag memory is accessed, other memories come flooding back. Repressers have more discrete memories than non-repressers. Hansen and Hansen concluded that the “patterns of emotion associated with repressers’ memories are fundamentally different from those of non-repressers. They are less rich or blunted” (p. 817). Any fear-tagged memories would thus be particularly inaccessible “within the repressive architecture” (p. 817).

## **Can Memories of Trauma be “Repressed”?**

A growing number of surveys and case studies have added weight to the notion that CSA can be forgotten for large periods of time, by certain people.

Studies conducted with (mostly female) adults have demonstrated that, under certain circumstances, some people can forget about sexual abuse for long periods of time (Gold, Hughes, & Hohnacker, 1994; Schefflin & Brown, 1996; Williams, 1994). Nevertheless, none of those studies has produced sufficient evidence to prove that people can forget the sexual abuse for all time (Loftus, 1994; Wakefield & Underwager, 1992), until recovered later as adults through some trigger of the memories.

Even the few case studies (e.g., Herman & Schatzow, 1987; Martinez-Toboas, 1996; Schooler, Bendiksen, & Ambadar, 1997; Taylor, 1997) that are now surfacing, in which the earlier sexual abuse has been corroborated (although the satisfactoriness of the corroboration varies from case study to case study) seem to suggest it is partial forgetting that is at work and not total forgetting (Gow, 1997b).

Knowing when the abuse has occurred is an essential part of the argument for repression. However, there is no evidence that people can recall events before the age of two (Loftus, 1993). Howe and Courage (1993) add that memories before the age of six may also be suspect. Spanos maintained it is likely that memories recovered in therapy of abuse before the age of three or so are likely to be confabulations. However, Squire and Butters (1992) argued that people may maintain some very early memories.

Reviewing Hilgard’s work on post-hypnotic amnesia, Baars and McGovern (1995) reported that 20% of the population demonstrate loss of access to memories. The authors claimed that memory loss or amnesias may be a less frequent outcome of trauma than intrusive memories. They cite a 1987 study by Madakasira and O’Brien which found that 61% of tornado victims suffered memory impairments; and also they reported that 27% of those people caught in the Hyatt Regency skyway collapse had memory deficits and 88% had repeated recollections of that disaster.

However, in the realm of CSA, False Memory Syndrome Foundation Scientific and Professional Advisory Board member Harrison Pope and his colleague James Hudson (1995): (a) emphasised that “[t]raumatic experiences are memorable” (p. 715); and (b) that there has never been a confirmed case of “noncontrived amnesia among neurologically intact individuals over the age of six who experienced events sufficiently traumatic that no one would be expected to simply forget them” (p. 716); and (c) that trauma survivors in scientifically valid studies “unanimously remembered the events” (p. 715).

In contrast to this, a strong theoretical and clinical body of knowledge supports the view that, if trauma is not dealt with and processed at the time of the traumatic event, it becomes dissociated. Trauma produces detachment, derealisation, depersonalisation, a sense of unreality, emotional numbing (Baars

& McGovern, 1995) and out of body experiences (Cardena & Spiegel, 1993). Classen, Koopman, and Spiegel (1993) argued that, if a client has severe dissociative symptoms at the time of the trauma, they may be especially vulnerable to later developing such dissociative states as multiple personality disorder, amnesia, fugue, or depersonalisation.

It is these persons, who dissociate out of the traumatic experience, who are likely to recover memories and relive these experiences at some time in the future. However, the effect of this trauma is believed to be observable through their everyday mental and physiological functioning by Taylor (1997). Thus, while the client is dissociated from the memory, the person's CSA history becomes observable by those who are qualified and attuned to read the signs showing they have been traumatised. Both Loftus and Spiegel testified in the Franklin trial that memories can influence behaviour, even though they have been kept out of conscious awareness (Spiegel & Schefflin, 1994).

Researchers agree that repression is the "phenomenon that prevents someone from remembering an event that can cause him [sic] pain and suffering" (Loftus & Loftus, 1976, p. 82, in Pope & Brown, 1996, p. 46), but they too are not convinced that memories can be totally repressed (Loftus, Garry, & Feldman, 1994). However, Loftus and Burns (1982) did find that subjects who saw a shocking film, in which a boy was shot in the face, showed poor retention of details of the film, giving rise to the notion that such mentally shocking episodes could "disrupt the lingering processing necessary for full storage of information in memory" (p. 318).

Hembrooke and Ceci (1995) maintain that the majority of traumatic memories can often be recalled quite well and say that there are no data to support Goodman's claim that it is because of high levels of stress that the memories are rendered impervious to mnemonic distortion (1991, in Hembrooke & Ceci, 1995).

Like Erdelyi (1990, in Pope & Brown, 1996), who maintains that Ebbinghaus's experimental study on repression proved that repression produced amnesia — which Erdelyi interpreted as directed or intentional forgetting — the scientific community now appears more ready to accept that memories of abuse can be forgotten partially or completely for long periods of time, but not totally.

Thus there are two camps of thought on the forgetting of true CSA: unconscious repression or conscious suppression. As Reisner (1996) believes, while the argument has been put forward that repression does not exist, the extreme position that repression itself may not exist is not justified. Indeed he argues there is a solid body of evidence that repression exists.

Holmes (1990, p. 96) stated that at that time there had been no controlled laboratory evidence which could support the concept of repression, whereas Brown (1995) disagreed, saying there was plenty of evidence available for its existence. Perhaps it depends on how repression is defined; certainly the term "robust repression" seems to fit only a few of the descriptions of some of the case studies mentioned in the following section on forgetting.



## **Forgetting Incidents of Abuse**

**Survey findings** It is now generally accepted that CSA survivors have some periods of time when they forget about the abuse (Binder, McNiel, & Goldstone, 1994; Briere & Conte, 1993; Davies, 1996; Feldman-Summers & Pope, 1994; Gold, Hughes, & Hohnecker, 1994; Herman & Schatzow, 1987; Loftus, Garry, & Feldman, 1994; Loftus, Polonsky, & Fullilove, 1994; Martinez-Taboas, 1996; Schefflin & Brown, 1996; Williams, 1994). Roe and Schwartz (1996) consolidated the results across a number of studies and reported that 30%–40% of clinical clients always remember, while 60%–70% forget partially. Moving to non-clinical studies, the rate of partial or total forgetting rests at 40%–60%.

**Case studies of corroborated recovered memories of abuse** Different case studies (Martinez-Taboas, 1996; Schooler et al., 1997; Spiegel & Schefflin, 1994; Takhar & Fisman, 1995) demonstrate that, while robust repression may appear to be the cause of the memory loss in sexual abuse, normal forgetting, or suppression, may be a better explanation. In only one of the reported cases does there seem to be an indication of complete repression.

While there are a number of questions about some of the case study reports, they are corroborated in some way and do prove that people can have a sudden, vivid, and emotionally overpowering remembering of a traumatic event. Courtois (1992) concluded that memories of CSA can be triggered off by normal developmental crises, exposures to similar events, associated crises, and issues within therapy and life crises. This links with the work of Van der Kolk et al. (1996) and of Briere (1992) on PTSD. Van der Kolk's theory is that the client will not reactivate the somatic memory until a certain level of arousal is reached and only then can the client go through the crisis fully and finally make some sense of it and reintegrate the experience within their life.

Perhaps the abuse surfaces at a time when it is reinterpreted within a new schema; that is, in one case (Schooler et al., 1997), the horror of being a victim. For this woman, the meaning of the abuse had changed. She had remembered the attack for two years after the rape and had then forgotten it, along with the memory of the trial of the perpetrator.

Whether the CSA has been completely forgotten, or not remembered in such a powerfully and emotionally disturbing manner, is another question.

## **THE CASE FOR RECOVERED MEMORIES BEING FABRICATED**

If some claims of CSA are false, then lying or confabulation on a continuum may be involved (Spanos, 1996). Confabulation is defined as “a falsification of memory” (Berlyne, 1972, in Dalla Barba, 1993, p. 567), an “extreme form of lying or deception” (Joseph, 1986, in Dalla Barba, 1993, p. 567), “an honest lying” (Moscovitch, 1989, in Dalla Barba, 1993, p. 567).

Confabulation can vary in the quality of its content, ranging from minor distortions of facts and information to really implausible and bizarre reports. In

view of this variation, it has been suggested that two distinct types of confabulation exist, both of which appear to apply to the problems of determining which memories are true and which are false: (a) the first type involves minor distortion of true autobiographical events or their misplacement in time and place and is usually produced in response to specific questions; and (b) the second type consists of the spontaneous fabrication of fantastic and more implausible tales. This type of distinction has not gone unchallenged (Dalla Barba, 1993).

Leaving aside the second type of fantastic tales such as alien abduction abuse (AAA), past life abuse (PLA), and most SRA, and then following on from the first type, as described by Dalla Barba, it is such honest lying that adds to the dilemma. Spiegel and Schefflin (1994) give an alternative hypothesis of an "honest liar" (see Spiegel, 1974, 1980, in Spiegel & Schefflin, 1994) and say that in the Eileen Franklin-Lipster case, Eileen may have been telling the truth as she saw it through the years of abuse she and others had apparently suffered from her father. That is, confabulation may have occurred (the father has now been acquitted) not because she had a real memory of the murder of a friend, but because allegedly she had multiple memories of different episodes of abuse to herself and reported events of abuse to others.

If the clients are not lying outright and some type of confabulation or honest lying is responsible for the errors, then what are some of the factors/influences in the construction or reconstruction of FRMA? Certainly hypnosis has been targeted as being influential in the construction of improbable tales.

### **Hypnosis and Memory**

For a long time hypnosis was erroneously considered to be a memory aid. However, memory aids of any kind may increase false alarms as well as hits (Dywan 1995; Klatzky & Erdelyi, 1985, in Dywan, 1995). Martinez-Taboas (1996, p. 228) cites and strongly agrees with Nash and Fox when they claim there is now sufficient evidence to indicate that there can indeed be cases of false positives (pseudomemory) and false negatives (repression).

We know it is a fact (via Erdelyi and Kleinbard, 1978, in Erdelyi, 1996) that hypnotic techniques can produce more information, but that information is both accurate and inaccurate and repeated recall efforts may improve true recollection. At the same time, Spiegel and Schefflin (1994) believe that perhaps this extra effort results in reporting fantasies as memories. Work by Sheehan and Tilden (1983) and Dywan and Bowers (1983) has demonstrated that, while the ratio of correct to incorrect information declines, the person is more convinced of the veracity of the memories. Others point out that this happens with non-hypnotically retrieved memories as well (Schefflin, 1994). McConkey and Sheehan (1995) have consistently warned about the possible influence of hypnosis on memory recall.

**Hypnotisability as a trait** The trait versus context positions may add some clarity to the quandary. The two-factor model of hypnotic responding posits that it is the ability or trait variables which are more important than contextual variables in producing responses to difficult hypnotic suggestions, whereas Kirsch, Silva, Comey, and Reed (1995) report that contextual variables, such as attitudes and expectancies, are more important than trait variables in predicting responses to easier suggestions.

Additionally, Sheehan's (1997b) findings that memory distortion is frequently linked with high confidence in the material being recalled does not augur well for the role hypnosis in FRMA. In Sheehan and Tilden (1986), of 26 high and 26 low hypnotisable subjects who received information that was either misleading or not misleading about a series of events depicting an apparent robbery, both high and low hypnotisable subjects incorporated misleading information into their memories to the same degree. Sheehan (1996, p. 44) is of the opinion that if a person has hypnotisability as a trait, then they are more susceptible to leading questions and are thus more open to pseudomemories.

However, other research indicating that it makes a difference if the material is seen to be real life and the subjects are made aware that their responses have serious consequences tends to indicate that subjects are less likely to produce pseudomemories in real life situations (Yuille & Cutshall, 1989). For a more extensive literature review of the issues surrounding hypnosis and memory see Gow, Powell, Popper, Coppin, and Lurie (1997), and for the case for hypnosis being utilised as a scapegoat for the complex problem of recovered memories see Gow (1997a).

### **Socio-Perceptual Factors**

Previously (Gow, 1998), I have argued that socio-perceptual factors combined with specific client characteristics, and triggers, such as certain critical incidents, within a particular context, may be responsible for some of the cases of FRMA, especially CSA. The key variables are related to client factors such as client vulnerability, eating disorders, paranormal beliefs, hysteria, suggestibility, fantasy proneness, family dynamics, clients' beliefs, media induction, the book market; and therapists' factors such as treatment approach, beliefs about the incidence of CSA, therapists' clinical and personal experience, treatment settings and precipitating incidents.

Bartlett's (1932, in Hirsch, 1988) work on schemas is also relevant here. He believed that people's beliefs, knowledge and schemata could distort their recollections of past events. In his famous "The War of the Ghosts" experiment, subjects were not able to retain the content of the tale, condensed the script, left out boring details and changed elements of the story that were foreign to them, and introduced entirely new aspects and quirks to the story.

Bartlett's explanations can be applied to the client with FRMA who feels justified in her/his conclusions: An individual does not normally take a situation

detail by detail and meticulously build up the whole. In all ordinary instances, s/he has an overmastering tendency simply to get a general impression of the whole; and on the basis of this, s/he constructs a probable detail. Very little of the construction is literally observed. But it is the sort of construction which serves to justify his/her general impression (p. 55, in Hirsch, 1988). Certainly, this has been a major problem in court cases about recovered memories of abuse where true cases of CSA have been dismissed because of the inability of the victim to give all the necessary details required. The court deems hesitancy an indication of doubt, rather than giving them time to recollect and put all the pieces together logically.

Narrative confabulation appears to be driven by internal or external schema (Bartlett, 1932, in Hirsch, 1988). For instance, Gardner (1996) reported one client who presented with memories of abuse by her father may have been expressing fears of abandonment, rather than of abuse.

Generally we accept that schemata overlap and become embedded in other schemata, and so we treat them as provisional theories open to revision (Hirsch, 1988), but such provisionalism changes to dogmatism in the stories of AAA and sometimes in CSA reports. In the case of constructed Multiple Personality Disorder (MPD), the exposure to societal schemas is influential.

**Hypnotisability and dissociative tendencies** Spanos, Weekes, Menary, and Bertrand (1986), reporting on earlier research on social role enactment, discovered that some kinds of hypnotic interviews gave the client encouragement to act out the symptoms of multiple personality. They maintained that the biographical accounts resemble a complex interweaving of veridically recalled past experience as well as distortion and elaboration. Ganaway (1995) thinks that, with enough transference, having a syndrome like multiple personality disorder (MPD) could act perhaps as a “catalyst for the reconfiguration of formerly inchoate experiences of dissociated control into a belief in concrete alternate personalities” (p. 134). Having arrived at this conclusion, the patient then reconstructs their past and finds the necessary CSA, etcetera.

While people believe that dissociative identity disorder is related to CSA, Ganaway (1995) says that very little evidence can be found to prove this. Yet more than 90% of MPD patients report a history of severe physical and sexual abuse (Classen et al., 1993). Furthermore, of the 20 MPD patients seen by Coons and Milstein (1986, in Classen et al., 1993), 17 of the cases of physical and sexual abuse were corroborated, hence contamination about CSA does not seem to be present here.

According to Leavitt (1994), patients alleging SRA reported higher levels of dissociation, in the range often exhibited by patients with multiple personality disorders (p. 387). Leavitt concluded that SRA reflected traumatic experiences that are authentic, or strongly held convictions that are false, or less probably allegations that are intentionally fabricated.

## **THE CASE FOR RECOVERED MEMORIES BEING BOTH REAL AND FABRICATED**

The uncomfortable position emerging from the literature is that memory generally is not like a videotape recording — it can be reconstructive and can add new information which changes and modifies the initial information (McDonald, 1995); therefore recall is unreliable. When issues relating to the use of hypnosis and suggestion enter the picture, then there is no clear outcome of which memories are true and which are false; indeed some clients, who are highly hypnotisable and highly suggestible, in combination with other characteristics and circumstances, may actually confabulate memories. Larsen (1995) affirms that “when we attempt to remember an experienced event, we are so confident that information at every level once existed that we almost inevitably reconstruct it if we do not remember it” (p. 342).

Research about memory is now contributing to clarification about both true and false memories of CSA and explains why some of the true reporting of CSA may be confused, inaccurate in some details such as time and place, or even reconstructed in some ways because of the melding of experienced events with reported events.

### **Research About Memory**

**News memory: Media influence explored** Larsen (1995) talks about news reports as being different from the text of most memory experiments, because they are about real events and because they are important in everyday life. Rasmussen (1956, in Larsen, 1995, see p. 327) says it is very important whether a remembered event is experienced or reported, because of the veridicality of information, as we are much more easily fooled by reports about events than when we experience them directly. Larsen has hypothesised that the memories of external events (from observation) are richer in contextual sensory and semantic detail, but internal events (from thinking) provide richer information about the cognitive operations that are performed to generate those internal events. Larsen argues that it is even possible, through reports, to learn about events that originated internally in somebody else’s thinking, for example, lies and imaginary events.

Brown, Heymann, Preskill, Rubin, and Wuletich (1977, in Larsen, 1995) concluded that memories based on experience and those based on description were equally susceptible to misleading questions one week after the event. Reisberg, Heuer, O’Shaughnessy, and McLean (1984, in Larsen, 1995) recorded that experienced events yielded higher ratings of vividness, affect and consequentiality — that is, whether the event changed the person’s life or not. Thompson (1985b, in Larsen 1995) found that the ratings of memorability were higher for personally experienced events than for events that were originally reported to the subjects by their room mates. Thus, this work indicates that

reported events generally are less prominent in memory than experienced ones — they are less vivid, less remarkable, less consequential, less affectively loaded and more difficult to access.

Citing Bower's (1967) concept of tag theories, Larsen (1995) maintains that the report-tag theory could imply that confusions of experienced and reported events should be quite common because the tag is subject to degradation or loss of strength by forgetting.

That is a very important point in understanding how FRMA occur as it could be that, as the reported events recede into the past, they might increasingly often be mistaken for personally experienced events: "That seems to happen only if the reports concern events that might (or actually did) take place as personal experiences. For instance, some early childhood memories may actually be stories that we have heard from parents and relatives" (p. 337, in Larsen, 1995). This raises the issue of possible contamination in the context of corroboration of CSA by relatives.

Barclay and Wellman (1986, in Brewer, 1995) confirmed that subjects were not clear about time issues with respect to memories, as they did not contain absolute dates and therefore could not be termed or classified as true episodic memories as defined by Tulving in 1972. Brewer's argument against that is that experiencing a personal memory (which occurs at a unique time and location) is logically independent of the individual's ability to assign an absolute date to that unique experience. Extrapolating such findings to CSA memories may not be possible, but they certainly give a lead for further research in the influence that the media has on false constructions of CSA and SRA.

Barsalou (1995) elaborates on the comprehension process which determines how memories for events become organised in memory. He describes the "Emory Campus" study in which students were asked about the events they were involved in during the previous summer holidays. Only 21% of the subjects could recall specific events. Attempts to get another group of subjects to be more specific about the events disturbed the subjects' normal mode of recalling the past. He concluded that "the retrieval of summarised and extended events, along with other kinds of information, appears to play an important role in accessing information about periods of one's life" (p. 201). Such research is very important for forensic work, especially in relation to RMA and questioning of the client by therapists or barristers.

The work by Jacoby (1995) contributes to the viewpoint that attribution may be a vital process to follow up in distinguishing between true and false recovered memories. Jacoby adopts the structuralist view and states that errors of false recognitions of high frequency words is linked to evidence that people base their memory reports on general knowledge of schemata, even when they are asked to report on the memory for a particular prior episode. Thus he says, from an attribution viewpoint, not only can the general be mistaken for the specific, but also the specific can be mistaken for the general. (Once again an important issue in determining who did what to whom in RMA.)

There has been a widely held belief among therapists that one must talk about a trauma to be free of one's negative reactions to it. Barsalou (1995) offers some findings that are especially pertinent to telling one's stories in court. With respect to narrative styles, Barsalou says that people may begin at the beginning of a temporal integral and work towards the end and move along in units of extended events — such as in personal storytelling. This organisation may not reflect underlying memory organisation, but might be organised instead in a different way or even be relatively unorganised. This is very important with respect to the retrieval of CSA. "Because an extended event may be activated during the processing of many specific events, and because it may often be retrieved during reminiscence, it may become well established in memory" (p. 220). Additionally, he says that because a specific event may receive much less processing, it may become relatively inaccessible after a short time, because it could experience interference from many events of its type. This idea could explain some of the reports of forgotten, and later recovered, experiences of CSA.

**Traumatic memory** While some argue for memory for traumatic events being different from non-traumatic events (van der Kolk et al., 1996), others do not (Ofshe & Singer, 1994). Brenneis (1997) supports the notion of the socially constructed nature of memory, but eschews the concept of a special traumatic memory which obscures explicit memory, which van der Kolk seems to suggest. According to the researchers in trauma, traumatic memories do not appear as explicit memory, but are fragmented, repetitive and occur in dreams and flashbacks with some unexplainable somatic experiences and different behavioural sequences (Brenneis, 1997).

Van der Kolk's (1996) model demonstrates that the limbic system which controls emotional arousal increases its activity during recall of traumatic experiences. LeDoux (1991), speaking of emotional memory in the brain, has outlined the role of the hippocampus and the amygdala in mediation of higher brain functioning. However, the work done by van der Kolk on the effects of trauma on the operations of the amygdala has not yet been sufficiently replicated to explain long-term repression of ongoing sexual abuse.

Loftus and Burns (1982) point out that people can distort, mislabel or omit information depending on their perceptions. The issues of encoding and decoding become paramount in the case for robust repression of traumatic memories. Williams (1994) maintains that memories for traumatic events are input, stored and retrieved differently from normal memories. Spiegel and Schefflin (1994) believe that opportunities for distortions in memory can occur at any phase during encoding, storage, and retrieval.

Kunzendorf and Moran (1994) summarise evidence that "stressful memories are incompletely encoded rather than actively censored, are inaccurately reconstructed rather than symbolically expressed, and are ultimately accessed with more effective retrieval cues rather than released from reversible amnesia"



(p. 291). If this is true, then the accuracy of such dissociated memories of CSA may be suspect with details of timing, place, and even person. Classen et al. (1993) would agree that a person who is dissociating from the trauma is not in a normal condition to encode clear memories, and may be dazed, in shock, and even amnesic for the event.

The description of false memories is important as researchers have shown that false memories can be often recollected with great clarity and detail (see Toglia, 1995) whereas real memories generally become less elaborate over time (Howe, Courage, & Peterson, 1994). Indeed Conway, Collins, Gathercole, and Anderson (1996) concluded that false memories were associated with familiarity, but not with a distinct state of awareness. They explain that to have correct retrieval, one has to consider that the material to be encoded is important and thus has consequences for the life of the person.

Finally Prozan (1997) quotes Person and Klar (1994) who point out that “trauma may be encoded primarily at the sensorimotor level rather than in symbolic linguistic forms, whereas fantasy is encoded primarily, but not exclusively, in symbolic linguistic forms” (p. 1072). More research is needed in this area.

### **The Future Challenge: Distinguishing True from False Memories**

Reisner (1996) reminds us that some RMA can be valid and some false. Spiegel and Schefflin (1994) confirm that the following is no guarantee of accuracy: amount of detail, clarity and vividness, richness of detail, emotional involvement, consistency over time, self-confidence, honesty and having a good memory. Very little research has been carried out on how therapists in practice can distinguish between false and true memories.

In fact, Loftus (1993) considers that “once activated, manufactured memories are indistinguishable from factual memories.” Spiegel and Schefflin (1994) confirm that there is no way to distinguish a real memory from a false one, along with Brenneis (1997) who asserts that we can’t discriminate false from true recovered memory, either on the basis of presentation or process.

### **SUMMARY**

This paper has summarised some of the evidence for RMA recovered for the first time as an adult being true. It has indicated that if some of the RMA are false, then some clients are lying, fantasising, or confabulating in some way. From all of the studies conducted on the forgetting of CSA, there is sufficient evidence that a substantial portion of people have partial or complete amnesia for the abuse for some periods of time, while an equal number remember it always; and that of those who claim to have forgotten the abuse entirely, a certain percentage of those have corroborated evidence for the abuse. The evidence that is accumulating is that people do have times in their lives when



they forget CSA. What is not clear is whether what they remember, when they remember it, is accurate. Such an issue is of vital importance in the courtrooms.

Unfortunately for the genuine victims of abuse and for the falsely accused members of the community, as yet we have no way of distinguishing false from true memories.

## REFERENCES

- Baars, B. J., & McGovern, K. (1995). Steps toward healing: False memories and traumagenic amnesia may coexist in vulnerable populations. *Consciousness and Cognition An International Journal*, 4, 68–74.
- Barsalou, L. W. (1995). The content and organization of autobiographical memories. In U. Neisser & E. Winograd (Eds.), *Remembering reconsidered: Ecological and traditional approaches to the study of memory* (pp. 193–243). New York: Cambridge University Press.
- Binder, R. L., McNiel, D. E., & Goldstone, R. L. (1994). Patterns of recall of childhood sexual abuse as described by adult survivors. *Bulletin of the American Academy of Psychiatry and Law*, 22, 357–365.
- Brenneis, C. B. (1997). *Recovered memories of trauma: Transferring the present to the past*. Madison: International Universities Press.
- Brewer, W. F. (1995). Memory for randomly sampled autobiographical events. In U. Neisser & E. Winograd (Eds.), *Remembering reconsidered: Ecological and traditional approaches to the study of memory* (pp. 21–90). New York: Cambridge University Press.
- Briere, J. (1992). Methodological issues in the study of sexual abuse effects. *Journal of Consulting and Clinical Psychology*, 60, 196–203.
- Briere, J., & Conte, J. (1993). Self-reported amnesia for abuse in adults molested as children. *Journal of Traumatic Stress*, 6, 21–31.
- Brown, L. S. (1995). Toward not forgetting: The science and politics of memory. *Counseling Psychologist*, 23, 310–314.
- Byrne, D. (1961). Repression–Sensitization scale: Rationale, reliability and validity. *Journal of Personality*, 29, 334–349.
- Cardena, E., & Spiegel, D. (1993). Dissociative reactions to the San Francisco Bay area earthquake of 1989. *American Journal of Psychiatry*, 150, 474–478.
- Classen, C., Koopman, C., & Spiegel, D. (1993). Trauma and dissociation. *Bulletin of the Meninger Clinic*, 57, 178–194.
- Conway, M. A., Collins, A. F., Gathercole, S. E., & Anderson, S. J. (1996). Recollections of true and false autobiographical memories. *Journal of Experimental Psychology — General*, 125, 69–95.
- Courtois, C. A. (1992). The memory retrieval process in incest survivor therapy. *Journal of Child Sexual Abuse*, 1, 15–31.
- Dalla Barba, G. (1993). Different patterns of confabulation. *Cortex*, 29, 567–581.
- Davies, J. M. (1996). Dissociation, repression and reality testing in the

- countertransference: The controversy over memory and false memory in the psychoanalytic treatment of adult survivors of childhood sexual abuse. *Psychoanalytic Dialogues*, 6, 189–218.
- Davis, P. J. (1987). Repression and the inaccessibility of affective memories. *Journal of Personality and Social Psychology*, 53, 585–593.
- Dywan, J. (1995). The illusion of familiarity: An alternative to the report-criterion account of hypnotic recall. *International Journal of Clinical and Experimental Hypnosis*, 43, 194–211.
- Dywan, J., & Bowers, K. (1983). The use of hypnosis to enhance recall. *Science*, 222, 184–185.
- Erdelyi, M. H. (1996). *The recovery of unconscious memories: Hypermnnesia and reminiscence*. Chicago: University of Chicago Press.
- Eriksen, C. (1954). The case for perceptual defense. *Psychological Review*, 61, 175–182.
- Feldman-Summers, S., & Pope, K. S. (1994). The experience of “forgetting” childhood abuse: A national survey of psychologists: Correction. *Journal of Consulting and Clinical Psychology*, 62, 636–639.
- Ganaway, G. K. (1995). Hypnosis, childhood trauma, and dissociative identity disorder: Toward an integrative theory. *International Journal of Clinical and Experimental Hypnosis*, 43, 127–144.
- Gardner, F. (1996). Open to all possibilities. *British Journal of Psychiatry*, 12, 343–349.
- Gold, S. N., Hughes, D., & Hohnacker, L. (1994). Degrees of repression of sexual abuse memories. *American Psychologist*, 49, 441–442.
- Gow, K. (1997a, September). *Suggestibility and “FMS”: Hypnosis as scapegoat: An exploratory hypothesis*. Paper presented at the Australian Society of Hypnosis Annual Conference, Perth.
- Gow, K. (1997b). *Recovered memories of abuse: Real, fabricated or both?* Unpublished dissertation, University of Melbourne, Australia.
- Gow, K. (1998). The complex issues in researching “false memory syndrome.” *Australasian Journal of Disaster and Trauma Studies*, 3, 1–12.
- Gow, K., Powell, A., Popper, A., Coppin, S., & Lurie, J. (1997, September). *Hypnosis, fantasy proneness and the recovered memory controversy*. Paper presented at the Australian Society of Hypnosis Annual Conference, Perth.
- Hansen, R. D., & Hansen, C. H. (1988). Repression of emotionally tagged memories: The architecture of less complex emotions. *Journal of Personality and Social Psychology*, 55, 811–818.
- Hembroke, H., & Ceci, S. J. (1995). Traumatic memories: Do we need to invoke special mechanisms? *Consciousness and Cognition: An International Journal*, 4, 75–82.
- Herman, J. L., & Schatzow, E. (1987). Recovery and verification of memories of childhood sexual trauma. *Psychoanalytic Psychology*, 4, 1–14.
- Hirsch, E. D. (1988). *Cultural literacy. What every American needs to know*. New York: Vintage.

- Holmes, D. S. (1990). The evidence for repression: An examination of sixty years of work. In J. L. Singer (Ed.), *Repression and dissociation* (pp. 85–102). Chicago: University of Chicago Press.
- Horowitz, M. J. (1976). *Stress response syndromes*. Northvale NJ: Jason Aronson.
- Horowitz, M. J. (1986). Stress response syndromes: A review of posttraumatic and adjustment disorders. *Hospital and Community Psychiatry*, 37, 241–249.
- Howe, M. L., & Courage, M. L. (1993). On resolving the enigma of infantile amnesia. *Psychological Bulletin*, 113, 305–326.
- Howe, M. L., Courage, M. L., & Peterson, C. (1994). How can I remember when “I” wasn’t there: Long-term retention of traumatic experiences and emergence of the cognitive self. *Consciousness and Cognition*, 3, 327–355.
- Jacoby, L. L. (1995). Memory observed and memory unobserved. In U. Neisser & E. Winograd (Eds.), *Remembering reconsidered: Ecological and traditional approaches to the study of memory* (pp. 145–177). New York: Cambridge University Press.
- Kihlstrom, J. F., Glisky, M. L., & Anguilo, M. J. (1994). Dissociative tendencies and dissociative disorders. *Journal of Abnormal Psychology*, 103, 117–124.
- Kirsch, I., Silva, C. E., Comey, G., & Reed, S. (1995). A spectral analysis of cognitive and personality variables in hypnosis: Empirical disconfirmation of the two-factor model of hypnotic responding. *Journal of Personality and Social Psychology*, 69, 167–175.
- Kunzendorf, R. G., & Moran, C. (1994). Repression: Active censorship of stressful memories vs source amnesia for self consciously dissociated memories. *Imagination, Cognition and Personality*, 13, 291–302.
- Larsen, S. F. (1995). Remembering without experiencing: Memory for reported events. In U. Neisser & E. Winograd (Eds.), *Remembering reconsidered: Ecological and traditional approaches to the study of memory* (pp. 326–355). New York: Cambridge University Press.
- Leavitt, F. (1994). Clinical correlates of alleged satanic abuse and less controversial sexual molestation. *Child Abuse and Neglect*, 18, 387–392.
- LeDoux, J. E. (1991). Systems and synapses of emotional memory. In L. R. Squire, N. M. Weinberger, G. Lynch, & J. L. McGaugh (Eds.), *Memory: Organization and locus of change* (pp. 205–216). New York: Oxford University Press.
- Loftus, E. (1993). The reality of repressed memories. *American Psychologist*, 48, 518–537.
- Loftus, E. F. (1994). The repressed memory controversy. *American Psychologist*, 49, 443–445.
- Loftus, E. F., & Burns, T. E. (1982). Mental shock can produce retrograde amnesia. *Memory and Cognition*, 10, 318–323.
- Loftus, E. F., Garry, M., & Feldman, J. (1994). Forgetting sexual trauma: What does it mean when 38% forget? *Journal of Consulting and Clinical Psychology*, 62, 1177–1181.

- Loftus, E. F., & Kaufman, L. (1992). Why do traumatic experiences sometimes produce good memory (flashbulb) and sometimes no memory (repression)? In E. Winograd & U. Neisser (Eds.), *Affect and accuracy in recall: Studies of flashbulb memories* (pp. 212–216). New York: Cambridge University Press.
- Loftus, E. F., Polonsky, S., & Fullilove, M. T. (1994). Memories of childhood sexual abuse — remembering and repressing. *Psychology of Women Quarterly*, 18, 67–84.
- Martinez-Taboas, A. (1996). Repressed memories: Some clinical data contributing toward its elucidation. *American Journal of Psychotherapy*, 50, 217–230.
- McConkey, K. M., & Sheehan, P. W. (1995). *Hypnosis, memory, and behavior in criminal investigation*. New York: Guilford Press.
- McDonald, A. N. (1995). *Repressed memories: Can you trust them?* Michigan: Fleming H. Revell.
- Ofshe, R. J., & Singer, M. T. (1994). Recovered-memory therapy and robust repression: Influence and pseudomemories. Special issue: Hypnosis and delayed recall: 1. *International Journal of Clinical and Experimental Hypnosis*, 42, 391–410.
- Olio, K. A. (1994). Truth in memory. *American Psychologist*, 49, 442–443.
- Pope, H. G., & Hudson, J. I. (1995). Can individuals “repress” memories of childhood sexual abuse? An examination of the evidence. *Psychiatric Annals*, 25, 715–719.
- Pope, K. S., & Brown, L. S. (1996). *Recovered memories of abuse: Assessment, therapy, forensics*. Washington, DC: American Psychological Association.
- Prozan, C. (1997). *Construction and dilemmas of reconstruction childhood sexual abuse of memory*. Northvale NJ: Jason Aronson.
- Reisner, A. D. (1996). Repressed memories: True or false. *The Psychological Record*, 46, 563–617.
- Roe, C. M., & Schwartz, M. F. (1996). Characteristics of previously forgotten memories of sexual abuse: A descriptive study. *The Journal of Psychiatry and Law*, 24, 189–205.
- Schefflin, A. W. (1994). Forensic hypnosis: Unanswered questions. *Australian Journal of Clinical and Experimental Hypnosis*, 22, 23–34.
- Schefflin, A. W., & Brown, D. (1996). Repressed memory or dissociative amnesia: What the science says. *The Journal of Psychiatry and Law*, 24, 143–187.
- Schooler, J. W., Bendiksen, M., & Ambadar, Z. (1997). Taking the middle line: Can we accommodate both fabricated and recovered memories of sexual abuse? In M. A. Conway (Ed.), *Recovered memories and false memories* (pp. 251–292). New York: Oxford University Press.
- Sheehan, P. W. (1996). *Moving to matters clinical in the analysis of memory distortion in hypnosis*. Invited address at the 7th European Congress of Hypnosis, Hungary.
- Sheehan, P. W. (1997a). *Recovered memories: Towards resolution of some issues across experimental and clinical domains*. Invited address at the 14th International Congress of Hypnosis, San Diego.
- Sheehan, P. W., (1997b). *Recovered memories of abuse*. Unpublished manuscript.

- Sheehan, P. W., & Tilden, J. (1983). Effects of suggestibility and hypnosis on accurate and distorted retrieval from memory. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 9, 283–293.
- Sheehan, P. W., & Tilden, J. (1986). The consistency of occurrences of memory distortion following hypnotic induction. *International Journal of Clinical and Experimental Hypnosis*, 34, 122–137.
- Spanos, N. (1996). *Multiple identities and false memories: A sociocognitive perspective*. Washington, DC: American Psychological Association.
- Spanos, N. P., Weekes, J. R., Menary, E., & Bertrand, L. D. (1986). Hypnotic interview and age regression procedures in the elicitation of multiple personality symptoms: A simulation study. *Psychiatry*, 49, 298–311.
- Spiegel, D., & Schefflin, A. W. (1994). Dissociated or fabricated? Psychiatric aspects of repressed memory in criminal and civil cases. Special Issue: Hypnosis and delayed recall: 1. *International Journal of Clinical and Experimental Hypnosis*, 42, 411–432.
- Squire, L. R., & Butters, N. (1992). *Neuropsychology of memory*. New York: Guilford.
- Takhar, J., & Fisman, J. (1995). Alien abduction in PTSD. *Journal of the American Academy of Child and Adolescent Psychiatry*, 34, 974–975.
- Taylor, A. J. W. (1997). Flashback to buried memories of sexual abuse in a case of homicide. *Australasian Journal of Disaster and Trauma Studies*, 2, 8–18.
- Toglia, M. P. (1995). Repressed memories: The way we were? *Consciousness and Cognition: An International Journal*, 4, 111–115.
- van der Kolk, B. A., McFarlane, A. C., & Walsaeath, L. (1996). Trauma and memory. In B. A. van der Kolk & A. C. McFarlane, (Eds.), *Traumatic stress: The overwhelming experience on mind, body and society* (pp. 279–302). New York: Guilford Press.
- Wakefield, H., & Underwager, R. (1992). Recovered memories of alleged sexual abuse: Lawsuits against parents. *Behavioral Sciences and the Law*, 10, 483–507.
- Williams, L. M. (1994). What does it mean to forget child sexual abuse? A reply to Loftus, Garry, and Feldman (1994). *Journal of Consulting and Clinical Psychology*, 62, 1182–1186.
- Yuille, J. C., & Cutshall, J. L. (1989). Analysis of the statements of victims, witnesses and suspects. In J. C. Yuille (Ed.). *Credibility assessment* (pp. 175–191). Norwell, MA: Kluwer Academic.

## **THE BRAIN AND HYPNOSIS: IS THERE A CHAOTIC CONNECTION?**

**Alison M. Weber**

*The Bendigo Health Care Group*

---

The search for a neural substrate for hypnosis has included a diversity of techniques and hypotheses and has produced a rich array of data. These approaches and data are reviewed leading to the conclusion that they point to a global or general cognitive factor in association with hypnotisability and that this general factor may well reflect a chaotic or non-linear aspect of brain function. The theoretical implications of such a chaotic factor are explored.

The endeavour to understand the neural basis of hypnosis has involved two broad types of measures of brain function:

1. Direct physical measures such as electroencephalogram, evoked potentials, and cerebral blood flow.
2. Indirect cognitive measures which use what is already known about cognition as it relates to brain function.

Both sorts of measures have been used in relation to hypnosis and to each other and the literature reflects the interplay of these various lines of evidence.

### **BRAIN LESION STUDIES**

There have been a number of reports about using hypnosis with brain-damaged individuals where the focus has been on helping them to feel and function better (Crasilneck & Hall, 1970, 1975; Eliseo, 1974; Johnson & Korn, 1980; LaClave & Blix, 1989; Le Page & Goldney, 1989; Manganiello, 1986; Milos, 1975; Parker, 1979; Sullivan, Johnson, & Bratkovitch, 1974; Zeltzer, Kellerman, Ellenberg, & Dash, 1983). Although these studies have not considered site of lesion with respect to the patient's capacity to engage in hypnosis, the diversity of brain dysfunctions covered implies that capacity for hypnosis is maintained

---

Requests for reprints should be sent to Alison M. Weber, Anne Caudle Campus, The Bendigo Health Care Group, PO Box 126, Bendigo, Victoria 3552.

despite varied areas of brain injury. It may even be that mental consciousness is not needed for hypnosis, in that susceptibility to suggestion appears to occur in unconscious subjects (Johnson & Korn, 1980; Smith & Adams, 1976). Walter et al.'s (1990) report that the same cognitive phenomenon may reflect different neural substrates in people with brain pathology as compared with hypnotised healthy subjects further indicates the flexibility of the brain with respect to producing mental phenomena in general, including hypnotic ones. The notion that hypnotic ability is based on global brain function is further supported by the finding of Query, Carlson, and Dreyer (1983) that hypnotisability requires intact general cognitive integrative capacity.

### **ULTRADIAN RHYTHMS OF REST/ACTIVITY**

Rossi (1994) argued that the rest phase of this naturally occurring cycle is a trance state and attributed Erickson's hypnotherapy technique to timing suggestions so that they coincided with such naturally occurring states. Brown (1991) similarly suggested that hypnosis is one culturally defined context of a rhythmic biological opportunity to enter a different state of consciousness. These notions seem to imply a transient brain state in relation to hypnosis and, given that it is generally agreed that the ultradian rest/activity cycle is very susceptible to environmental influences, it would also be compatible with such a state being induced by the more traditional hypnotic techniques.

There is considerable evidence of such a naturally occurring rest/activity cycle in humans (see reviews by Brown, 1991; Stupfel & Pavely, 1990) and, although their neural origin is unknown (Moore-Ede, Sulzman, & Fuller, 1982; Stupfel & Pavely, 1990), it is thought to be in multiple, loosely organised underlying substrates, and to include fluctuations in global electroencephalographic activity of the cortex that is not specific to any particular frequency (Brown, 1991).

### **ELECTROENCEPHALOGRAPHIC (EEG) STUDIES**

The EEG is the technique that is most commonly used in studies that seek to relate brain activity to hypnosis. It measures electrical activity of the brain and is mainly sensitive to activity reaching to or generated in the cortex near the surface of the brain (Daube, 1996; Lagerlund, 1996).

The focus of EEG studies in relation to hypnosis has varied over time. The earlier classification of frequencies and associated brain function in adults was in terms of general arousal, ranging from the delta (0.1–3 Hz) of deep sleep, through theta (4–7 Hz) waves of drowsiness and hypnogogic states and alpha (5–13 Hz) waves of the waking brain at rest to beta waves (14–36 Hz) of the more active brain. Children were generally characterised as having slower frequencies that approached adult patterns at around puberty (Hughes, 1982).

The early studies (1930s to 1960s) of hypnosis and brain activity followed this general arousal model, looking for an EEG state that distinguished the

hypnotic condition from other mental states (Sabourin, 1982). No such distinctive EEG state was found, suggesting that hypnosis did not exist as some transient unique brain state. From about the late 1960s, the focus switched from the hypnotic state itself to hypnotisability. Many studies linking particular EEG frequencies with hypnotisability have been performed and some of these studies also refer to cognitive substrates for hypnotisability.

There is a related literature that looks at associations between cognition and EEG frequencies as well as between cognition and hypnotisability. There is also some speculation regarding the common neuroanatomical substrates for specific kinds of cognition, hypnotisability, and EEG measures.

Allowing for some inconsistencies in results due to procedural variation, the most promising finding appears to be that theta (4–7 Hz) shows a positive association with hypnotisability (Crawford, 1994; Crawford & Gruzelier, 1992; Graffin, Ray, & Lundy, 1995; Ray, 1997) though this claim is disputed by DePascalis (1993) and Saletu (1987). Theta in adults has been associated with two broad groups of mental states: drowsiness and mental activity (Nakagawa, 1988; Schacter, 1977). In children theta is the normal background rhythm until it is replaced by alpha at around puberty (Hughes, 1982; Klass & Westmoreland, 1996).

A number of research studies have looked at theta in the context of mental task activity by healthy adults and have found theta to be positively correlated with a variety of mental tasks (Arnolds, Lopes Da Silva, Aitink, Kamp, & Boeijinga, 1980; Gutierrez & Corsi-Cabrera, 1988; Mizuki, Tanaka, Isozaki, Nishijima, & Inanaga, 1980; Schacter, 1977; Yamamoto & Matsuoka, 1990). Crawford and others (e.g., Crawford, 1994) have suggested that theta is associated with any task involving focused attention and that it involves inhibitory processing as well as excitatory activity.

Animal studies (Miller, 1991) have indicated that theta waves originate in the hippocampus (particularly CA1 and dentate areas), resonate interactively with the cortex (with septal and diagonal band nuclei serving as pacemakers for this rhythm and resonance), and are associated with the initial difficult phase of learning and reduce as the task is mastered. Some similar findings exist in humans linking the hippocampus, theta, learning, and hypnosis (Arnolds et al., 1980; DeBenedittis & Sirrioni, 1988; Kolb & Wishaw, 1990; Michel, Lehmann, Henggeler, & Brandeis, 1992).

There has been some equivocal association of gamma waves (40 Hz) with hypnotisability (De Pascalis, 1989, 1993; De Pascalis, Marucci, & Penna, 1989; Schnyder & Allen, 1995; Ulett, Akpinar, & Itil, 1972). Indirect support for this notion also comes from Sheer's (1970, 1976, 1984, 1989) demonstration that gamma waves in animals have hippocampal origins and are associated with focused attention (a cognitive function often related to hypnotisability). He attributed gamma to the early stages of learning and theta to the later ones, a slightly different view than that of Miller regarding theta. However, not all studies have supported this association of gamma and focused attention



(Marucci, De Pascalis, Penna, & Pessa, 1989) and no human studies relating to the source of gamma activity were found.

Hypnosis bears no consistent relationship with 5–13 Hz alpha frequencies (Crawford & Gruzelier, 1992; De Pascalis, 1989, 1993; Graffin et al., 1995; London, 1976; Ray, 1997; Sabourin, 1982; Saletu, 1987), which in turn are associated with waking rest or perhaps simple cognition (Barabasz, 1982; Gutierrez & Corsi-Cabrera, 1988; Ray, 1990; Schacter, 1977; Vogel, Broverman, & Klaiber, 1968). A number of neurological explanations and brain localisations have been offered in relation to alpha (Michel et al., 1992; Ray, 1990) but we do not really have a definite understanding of its brain source.

Similarly for 14–36 Hz beta waves which are positively associated with mental excitation or activation and inversely with habituation and voluntary effort (Ray, 1990; Sheer, 1989; Vogel et al., 1968) and brain origin has been suggested by Michel et al. (1992) to lie deeper and anterior to alpha (the most posterior and superficial source). There has been limited research regarding this frequency and hypnotisability and results are equivocal (De Pascalis, 1993; Ulett et al., 1972, but not Graffin et al., 1995). If beta is associated positively with excitability and inversely with habituation, then its association with hypnosis would be expected to vary according to which state was triggered by specific instructions or suggestions and such variability may account for the equivocal findings.

Very little interest has been shown with respect to delta (0.1–3 Hz) and hypnotisability or delta and cognition. There has been some indication that it is inversely related to hypnotisability (Ulett et al., 1972) and that when it does occur it may be related to hypnotic suggestions of sleepiness (Saletu, 1987). Michel et al. (1992) found indications that the source of delta was the deepest and most anterior relative to the estimated sources of alpha, beta, and theta.

## **EVOKED POTENTIAL STUDIES**

This technique is a variation of EEG measurement that shows the average change over time in the way a person's brain activity responds to a given stimulus that is presented many times. The early part of the response that occurs in the first 0 to 200 milliseconds has been found to reflect processing of exogenous stimulus characteristics such as brightness or loudness while the later component that occurs from 200 to 500 milliseconds has been found to indicate more endogenous cognitive processing (Swick, Kutas, & Neville, 1994). With respect to cognitive correlates of the evoked potential, a great variety of cognitive processes have been found (Perlini, Spanos, & Jones, 1996; Spiegel & Vermutten, 1994) and no evoked potential component has as yet been shown to have a one-to-one correspondence with any specific cognitive process.

With respect to hypnotic phenomena, most evoked potential studies have focused on the relationship of the early component to hypnotic capacity for

altering perception. High hypnotisability has been reported to be related to a natural tendency to augment responsiveness to stimuli (Crawford & Gruzelier, 1992; Dragutinovich & Sheehan, 1986; Hogan, MacDonald, & Olness, 1984; Jutai, Gruzelier, Golds, & Thomas, 1993). Other studies have examined the effect of hypnotic suggestion for reduced or blocked awareness of stimuli. Perlini et al. (1996) and Spiegel and Vermuten (1994) concluded that most such studies showed no change in evoked potential despite subjective reports of changed perception. However, there have been some recent studies supporting the presence of early component changes during hypnotic negative hallucinations where an obstructive wall or sound is used in order to block out the stimulus (Jasiukaitis, Nouriani, & Spiegel, 1996; Kunzendorf & Boisvert, 1996). Further studies have demonstrated a relationship between high hypnotisability and focused attention (Crawford, 1994; Crawford & Gruzelier, 1992; London, 1976; Zacharie & Bjerring, 1994).

### **CEREBRAL BLOOD FLOW (CBF) STUDIES**

Because increased activity level of neurons results in their increased demands for nutrients such as oxygen and glucose that are carried to them via the bloodstream, increases or decreases in capillary blood flow reflect similar changes in neuronal activity (Kertesz, 1994). Fluctuations in cerebral blood flow (CBF) can be monitored via clearance of radioactive isotopes that have been introduced into the bloodstream. Several such studies have shown an association of globally increased blood flow in relation to hypnosis and hypnotisability although there were sometimes some additional localised areas of activation that were probably task specific (Crawford, 1996; Cawford, Gur, Skolnick, Gur, & Benson, 1993, Diehl, Meyer, & Meinig, 1989).

Simple CBF measures give relatively poor resolution of spatial images and only reflect blood flow at the surface of the brain. Techniques like Positron Emission Tomography (PET) and Single Photon Emission Computerized Tomography (SPECT) allow detection and analysis of blood flow with greater spatial resolution and with three-dimensional imaging that can portray deep as well as surface brain activity (Lassen & Holm, 1992; Phelps, 1992). However, even these techniques have their limitations and interpretive ambiguities (Chertkow & Bub, 1994; Kertesz, 1994). In particular, it should be noted that blood flow may reflect either excitatory or inhibitory neuronal activity and time factors are somewhat imprecise in relation to task presentation.

### **LATERALISATION STUDIES**

The cerebral hemispheres have generally been found to demonstrate different cognitive processing styles in most right-handed people, particularly males: the left hemisphere being more proficient for verbal, analytic, sequential tasks and the right hemisphere for spatial, global, simultaneous processing (Walsh, 1994).

In the 1960s and 1970s, it was thought that hypnotic experience reflected the latter type of processing and was thus indicative of the right hemisphere constituting the neurological substrate of such experience. More recent evidence, however, indicates that the left hemisphere also plays a role (Jasiukaitis, Nouriani, Hugdahl, & Spiegel, 1997).

Various measures of lateralisation of brain involvement in hypnosis have been used and have given equivocal results (Crawford, 1996; Crawford, Crawford, & Koperski, 1983; De Pascalis, 1989, 1993; De Pascalis, Marucci, & Penna, 1989; Edmonston & Moscovitz, 1990; Graffin et al., 1995; Graham & Pernicano, 1979; McCormack & Gruzelier, 1993; Otto-Salaj, Nadon, Hoyt, Register, & Kihlstrom, 1992; Query et al., 1983; Ruggieri, Capozzi, & Clavenzani, 1989; Singh & Meng, 1989; Tiller & Persinger, 1994). There has been a recent attempt to consider anterior/posterior brain involvement in hypnotic phenomena in conjunction with left/right lateralisation (Gruzelier & Warren, 1993; Meszaros, Crawford, Szabo, Nagy-Kovaks, & Revesz, 1989) but these findings are also equivocal. The conclusion that both hemispheres are important in hypnosis is the current understanding. It is hardly a surprising one given that even simple hypnotic procedures usually involve a combination of verbal instruction and the suggestion of visuospatial imagery. Also, other cognitive factors that have been associated with hypnotisability like focused attention and absorption are not tied to hemispherically lateralised modes of processing but are more general in nature.

## **COGNITIVE STUDIES**

A great variety of cognitive tasks have been investigated with respect to their association with hypnotisability in an indirect attempt to find the neural substrate of this capacity. Almost all of these measures have been found to be positively related to hypnotisability: focused attention (Crawford, 1994; Crawford, Brown, & Moon, 1993); absorption (Crawford, Gur, Skolnick, Gur, & Benson, 1993; Tellegen & Atkinson, 1974; Yanchar & Johnson, 1981); a "pertinence" measure of selective attention and memory (Karlin, 1979); random number generation (Graham & Evans, 1977); resistance to visual masking (Acosta & Crawford, 1985; Saccuzzo, Safran, Anderson, & McNeil, 1982; but not Friedman, Taub, Sturr, Church, & Monty, 1986); locating embedded figures (Wallace & Patterson, 1984); double-digit addition (Wallace & Patterson, 1984); dissociation of subsystems of consciousness (Pekala & Kumar, 1989); use of fantasy and imagery to improve quality of life when bored or lonely (Jackson & Sheehan, 1986); perceptual reversals of the ambiguous Necker cube (Crawford, Brown, & Moon, 1993; Wallace, 1986); autokinetic illusion (Crawford, Brown, & Moon, 1993); both automaticity and purposeful strategies depending on situation and instructions in relation to a Stroop task (Dixon & Laurence, 1992; Sheehan, Donovan & MacLeod, 1988); sustaining performance of hypnotic suggestions despite the presence of contradictory suggestions

(Zamansky & Clarke, 1986); and perhaps expectancy (Council, Kirsch & Grant, 1996). It thus seems that highly hypnotisable people are more responsive to a number of cognitive task demands than lows, including automatic perceptual phenomena such as Necker cube reversals and autokinetic illusions as well as more purposeful tasks like focused attention.

## **MEASUREMENT CONSIDERATIONS**

The endeavour to link hypnotic phenomena with brain function could benefit from use of more sophisticated measures of brain function such as PET, SPECT, functional MRI and magnetic EEG, and using combinations of measures that capitalise on the information that each has to offer, for example, the anatomical localising capacity of PET with evoked potential indications of the excitatory nature of activity and its temporal aspects. A further need is for a more standardised approach to measurement of hypnotisability and to the various brain functions measures. It would overcome the existing problem of not knowing whether inconsistent findings stem from methodological diversity or are intrinsic to the topic itself, that is, to the relationship of hypnotisability to brain function. Such a move would require cooperation and coordination between research laboratories.

## **FUTURE DIRECTIONS**

### **A Global Focus**

A variety of findings point towards a fairly global brain capacity in relation to hypnosis:

1. EEG and EP indications related to a generic cognitive capacity for focused attention which may additionally involve varying brain loci according to specific content of suggestions;
2. the tendency of highly hypnotisable subjects to show more responsiveness to a great variety of tasks than lows, not all of which can be attributed to focused attention factors;
3. indications of cerebral blood flow activation of global cortical areas;
4. lack of support for consistently lateralised or frontal/posterior localisation of hypnotic phenomena;
5. the brain's robustness with respect to brain-injured persons benefiting from hypnotic treatment; and
6. the tentative alignment of the ultradian rhythm model of hypnosis with widespread rather than localised brain involvement.

Non-linear responsiveness may be the underlying global brain factor for hypnotisability. In keeping with this notion are the suggestions by Woodard (1996) that hypnotisability is responsiveness to instructions that change figure–

ground organisation of the phenomenal self-field and by Crawford (1989) that capacity for cognitive and physiological flexibility may well underlie hypnotic responsiveness.

### **POSSIBLE CHAOTIC OR NON-LINEAR MODEL OF BRAIN INVOLVEMENT IN HYPNOSIS**

A chaotic approach to understanding brain function could well help clarify the relationship of hypnotic behaviour to brain function. In particular, it could help explain the positive correlation between hypnotisability and a wide range of cognitive functions.

Non-linear dynamics or chaos are terms that refer to a mathematical model for understanding data that appear to be disordered and randomly unpredictable but which actually have an overall predictable form even though there are also constant variations around that theme and many phenomena of nature have been found to demonstrate such variability (Blair, 1994; Elsner & Tsonis, 1992; Gleik, 1987; Gutierrez & Almirall, 1989; Lampton, 1992). A number of human physiological functions have been found to show evidence of such non-linear behavior (Glass, Goldberger, Courtemanche, & Shrier, 1987; Lund, Mosekilde, & Hansen, 1993; May, 1989; Olsen, Truty, & Schaffer, 1988; Stewart, 1988) and Pool (1989) has suggested that such spontaneous variability constitutes the normal healthy state and that reduction in such variability is associated with dysfunction and illness.

Electrical aspects of brain function appear to be the primary focus of efforts to measure brain chaos. Various measures of the degree of such variability have been used, the most common being some version of the "correlational dimension" style of measurement which is sometimes called "D2," "DCx," or "pointwise dimension" (Freeman, 1994; Freeman & Skarda, 1985; Lutzenberger, Preissl, & Pulvermueller, 1995; McKenna, McMullen, & Shlesinger, 1994; Pradhan & Dutt, 1993). Measures are also evolving that address changes in the chaoticity of the brain (Kowalik & Elbert, 1994; Pezard, Martinerie, Breton, Bourzeix, & Renault, 1994). The measurement of non-linear behaviour is still developing and there are subjective judgment components to the correlational-dimension estimation procedures so that it is currently advised that this measure be used only for relative comparisons of brain activity under different conditions and not as an absolute measure of chaotic variability (Jansen, 1996; Pritchard & Duke, 1995).

The brain is thought to demonstrate non-linear function at all levels, from single-cell activity through to global EEG measures (King, 1996; McKenna et al., 1994). That the inherent chaos or spontaneous variability of the brain's electrical function is reduced in association with brain illness is suggested by evidence concerning Parkinson and Alzheimer patients (Pritchard et al., 1994; Stam et al., 1994).

With respect to the question of what chaotic electrical patterns actually

signify about brain function, research is still in its very early stages. However, some interesting pointers exist. Germana and Lancaster (1995) review data which suggest that chaotic activity opens the brain to novel experiences and to preparation for alternative responses and subsides and is replaced by more regular activity as learning, problem solving, comprehension, and perceptual recognition become established. Alexander and Globus (1996) talk about the “edge-of-chaos” existence of the brain, poised on the boundary between order and chaos and thus able to alternate between ordered states for recognition, engaged and unreceptive modes of mental processing and chaotic states for alert, ready, and receptive processing. Similarly, MacCormac (1996) describes the chaotic capacity of the brain as a mode of self-organisation that produces unpredictable creative cognitive behaviour and Barton (1994) suggests that constructive aspects of memory are the result of irregular spontaneous (chaotic) brain activity interacting with ongoing experience to create changing memories. That the ordered and chaotic states can be closely integrated is supported at the neuroanatomical level by the finding of Rezvova, Frolov, and Markevich (1995) that theta rhythm in the rat hippocampus shows both regular and chaotic components.

Given the positive correlation between hypnotisability and responsiveness to a wide variety of cognitive tasks and its apparent global brain involvement, it seems reasonable to propose that hypnotisability may reflect a heightened chaotic factor that enables extra cerebral adaptiveness to whatever tasks, including hypnotic ones, are presented to the person. If such individual differences in chaotic brain function were established they may be found to associate positively with hypnotisability, that is, highly hypnotisable people may demonstrate higher levels of chaotic brain function than lows. A methodological problem arises here however: Given that absolute measures of chaotic function are not currently reliable (Jansen, 1996; Pritchard & Duke, 1995), it may not be possible at this time to assess individuals with a direct simple measure of chaotic complexity or variability. But relative measurement within an individual across cognitive conditions does appear to be possible and it may be feasible to develop some relative measure of chaotic responsiveness that could be used to differentiate individuals. The desirability of establishing core standardised procedures across different research laboratories is even more critical in non-linear types of analysis because of the widely different outcomes that can be produced by relatively minor differences in the initial data input, a characteristic of chaotic patterns known as “sensitive dependence on initial conditions.” That is, the same capacity for expanding creativity in end result that allows the chaotic process to prepare the individual for new experience or thought can also be triggered by different experimental procedures and thus contaminate the data.

Only one study has been found that used chaotic measures in relation to hypnosis. That is the study by Ray (1997). He reported that there was increased chaotic activity in the parietal and occipital areas relative to frontal and temporal

areas for people engaging in mental mathematics and a more even pattern of chaotic levels (all brain areas of similar level to the previously mentioned parieto-occipital findings) during a positive imagery task. He subsequently compared low and high hypnotisable subject data from another study (Graffin et al., 1995) which he re-analysed to look at activity under baseline condition and found that highly hypnotisable subjects showed the same global chaotic pattern as had previously been associated with positive imagery whereas lows showed a pattern similar to that for mathematics (although with apparently lower involvement of frontal and temporal areas). Ray interprets this finding as suggesting that highly hypnotisable subjects show an underlying brain pattern associated with imagery whereas lows show patterns consistent with cognitive activity. This is one valid interpretation. However, it could equally be argued that the data support a more global pattern of chaotic activation for highly hypnotisable people, a finding that would support the current hypothesis that highs have more of this factor than lows.

Any theory about the brain substrates for hypnosis must take into account any natural variations in hypnotisability between specific populations. For example, clinicians often refer to children being more hypnotisable than adults (London, 1976; London & Cooper, 1969; Morgan & Hilgard, 1978). If children are indeed more hypnotisable than adults then it could be argued that they should also show more of whatever brain substrates are posited as being relevant to hypnotisability for adults. In fact children do show more of another factor that is fairly consistently related to hypnotisability in adults, namely theta EEG waves (Hughes, 1982). Children's brains also differ from adult brains in that they have more neurons and neuronal connections than adults and require more sleep (Lehr, 1990). All these factors tend to reach adult levels at around puberty or soon after. If an association between brain chaotic activity and hypnotisability were found in both children and adults and chaotic level was higher for children than adults, then the most likely neural substrate would seem to be the greater number of neurons and synaptic connections present in children's brains but which later reduce by processes of shedding and pruning to reach adult levels (Kolb & Wishaw, 1990). Could it be that highly hypnotisable adults have somehow retained more neurons and synaptic connections than lows? If so, then are there similar differences between low and highly susceptible children?

## **THEORETICAL CONSIDERATIONS**

There are many theories about the nature of hypnosis that currently fall into two main groups: socio-cognitivist and neodissociationist (Lynn & Rhue, 1991). If a general chaotic responsivity were found to be associated with hypnotisability, then hypnosis researchers would have an anchor for their explorations of inherent individual differences in hypnotisability as well as the factors that enhance or hinder this phenomenon.

It should be kept in mind that we are not talking about any hypnotic subject being in a continuously chaotic brain state but rather that there may be an alternation between or mixture of ordered and chaotic function. This distinction may help us tease apart the general factor of hypnotisability (perhaps chaotic) from the more specific brain involvement for particular hypnotic stimuli or tasks (perhaps ordered). It is also possible that particular patterns of brain involvement and EEG frequencies may be found to vary chaotically in response to particular hypnotic suggestions and thus account for at least some of the variability in existing data. It may further be that there are definite interrelationships between chaotic function and other measures of brain function, for example, with stage of learning or task performance (Germana & Lancaster, 1995; Miller, 1991).

Another point of theoretical interest is the role of chaotic activity in producing flexible mental functioning and focusing of attention. This capacity in its deliberate intentional form has previously been related to the pre-frontal lobe area (e.g., Walsh, 1994) and to the hypnotic state (Crawford, 1994). It is possible, however, that the chaotic factor may provide a different sort of flexibility, one that is spontaneous in nature and that is relevant to hypnotic responsiveness. Such an explanation would be less inherently contradictory than the frontal one that has difficulty accounting for the fact that children (whose frontal lobes are slightly less fully developed than adults according to Luria, 1973) are reported to be more hypnotisable than adults and the fact that in many ways the hypnotist takes over the role of the frontal lobes by giving suggestions and direction to the subject's hypnotic activity so that the subject's frontal lobes are probably minimally required in the process. If frontal capacity is required for any aspect of hypnosis it would seem to be in self-hypnotic efforts rather than in ones that involve another person as the hypnotist.

Of course, in all this endeavor to find a neural substrate for hypnosis we must keep in mind that an association does not necessarily imply causality nor specify direction of effect. For example, the fact that theta and hippocampal activity are associated with hypnotisability does not necessarily mean that the hippocampus or theta cause hypnotisability or vice versa.

Furthermore, any ultimate explanation of the mind-brain relationship in connection to hypnosis must also deal with the still mysterious question of how the brain produces conscious mental phenomena at all and how mental phenomena such as thoughts and perceptions appear to further influence brain function. Even the socio-cognitivists would ultimately need to deal with this issue in order to have a full explanation for their model.



## REFERENCES

- Acosta, E. Jr., & Crawford, H. J. (1985). Iconic memory and hypnotizability. Processing speed, skill, or strategy differences? *International Journal of Clinical and Experimental Hypnosis*, *33*, 236–245.
- Alexander, D. M., & Globus, G. G. (1996). Edge-of-chaos dynamics in recursively organized neural systems. In E. R. MacCormac & M. I. Stamenov (Eds.), *Fractals of brain, fractals of mind. In search of a symmetry bond* (pp. 31–73). Philadelphia: John Benjamin.
- Arnolds, D. E. A. T., Lopes Da Silva, F. H., Aitink, J. W., Kamp, A., & Boeijinga, P. (1980). The spectral properties of hippocampal EEG related behaviour in man. *Electroencephalography and Clinical Neurophysiology*, *50*, 324–328.
- Barabasz, A. F. (1982). Restricted environmental stimulation and the enhancement of hypnotizability: Pain, EEG alpha, skin conductance and temperature responses. *International Journal of Clinical and Experimental Hypnosis*, *30*, 147–166.
- Barton, S. (1994). Chaos, self-organization, and psychology. *American Psychologist*, *49*, 5–14.
- Blair, J. K. (1994). *Chaos in biological systems*. Unpublished honours thesis, Department of Computer Science and Engineering, Monash University, Melbourne.
- Brown, P. (1991). Ultradian rhythms of cerebral function and hypnosis. *Contemporary Hypnosis*, *8*, 17–24.
- Chertkow, H., & Bub, D. (1994). Functional activation and cognition: The 15-O PET subtraction method. In A. Kertesz (Ed.), *Localization and neuroimaging in neuropsychology* (pp. 151–184). New York: Academic Press.
- Council, J. R., Kirsch, I., & Grant, D. L. (1996). Imagination, expectancy, and hypnotic responding. In R. G. Kunzendorf, N. P. Spanos, & B. Wallace (Eds.), *Hypnosis and imagination* (pp. 41–65). Amityville, NY: Baywood.
- Crasilneck, H. B. & Hall, J. A. (1970). The use of hypnosis in the rehabilitation of complicated vascular and post-traumatic neurological patients. *International Journal of Clinical and Experimental Hypnosis*, *18*, 145–159.
- Crasilneck, H. B., & Hall, J. A. (1975). Hypnosis in neurological problems and rehabilitation. In H. B. Crasilneck & J. A. Hall (Eds.), *Clinical hypnosis: Principles and applications* (pp. 203–222). New York: Grune & Stratton.
- Crawford, H. J. (1989). Cognitive and physiological flexibility: Multiple pathways to hypnotic responsiveness. In V. A. Gheorghiu, P. Netter, H. J. Eysenck, & R. Rosenthal. (Eds.), *Suggestion and suggestibility. Theory and research* (pp. 155–167). New York: Springer-Verlag.
- Crawford, H. J. (1994). Brain dynamics and hypnosis: Attentional and disattentional processes. *International Journal of Clinical and Experimental Hypnosis*, *42*, 204–232
- Crawford, H. J. (1996). Cerebral brain dynamics of mental imagery: Evidence and issues for hypnosis. In R. G. Kunzendorf, N. P. Spanos, & B. Wallace (Eds.), *Hypnosis and imagination* (pp. 253–282). Amityville, NY: Baywood.

- Crawford, H. J., Brown, A. M., & Moon, C. E. (1993). Sustained attentional and disattentional abilities: Differences between low and highly hypnotizable persons. *Journal of Abnormal Psychology, 102*, 534–543.
- Crawford, H. J., Crawford, K., & Koperski, B. J. (1983). Hypnosis and lateral cerebral function as assessed by dichotic listening. *Biological Psychiatry, 18*, 415–427.
- Crawford, H. J., & Gruzelier, J. H. (1992). A midstream view of the neuropsychophysiology of hypnosis: Recent research and future directions. In E. Fromm & M. Nash (Eds.), *Contemporary hypnosis research* (pp. 227–266). New York: Guilford.
- Crawford, H. J., Gur, R. C., Skolnick, B., Gur, R. E., & Benson, D. B. (1993). Effects of hypnosis on regional cerebral blood flow during ischemic pain with and without suggested hypnotic amnesia. *International Journal of Psychophysiology, 15*, 181–195.
- Daube, J. R. (1996). Waveform parameter classifications. In J. R. Daube (Ed.), *Clinical neurophysiology* (pp. 60–64). Philadelphia: F. A. Davis.
- De Benedittis, G., & Sironi, V. A. (1988). Arousal effects of electrical deep brain stimulation in hypnosis. *International Journal of Clinical and Experimental Hypnosis, 36*, 96–106.
- De Pascalis, V. (1989). Hypnotic susceptibility, alpha waves and 40 Hz EEG rhythm, and personality. In V. A. Gheorghiu, P. Netter, H. J. Eysenck, & R. Rosenthal (Eds.), *Suggestion and suggestibility: Theory and research* (pp. 221–239). New York: Springer-Verlag.
- De Pascalis, V. (1993). EEG spectral analysis during hypnotic induction, hypnotic dream and age regression. *International Journal of Psychophysiology, 15*, 153–166.
- De Pascalis, V., Marucci, F. S., & Penna, P. M. (1989). 40-Hz EEG asymmetry during recall of emotional events in waking and hypnosis: differences between low and high hypnotizables. *International Journal of Psychophysiology, 7*, 85–96.
- Diehl, B. J. M., Meyer, H. K., & Meinig, G. (1989). Mean hemispheric blood perfusion during autogenic training and hypnosis. *Psychiatry Research, 29*, 317–318.
- Dixon, M., & Laurence, J-R. (1992). Hypnotic susceptibility and verbal automaticity: Automatic and strategic processing differences in the Stroop color-naming task. *Journal of Abnormal Psychology, 101*, 344–347.
- Dragutinovich, S., & Sheehan, P. W. (1986). Hypnotic susceptibility and cortical modulation of stimulus intensity. *Australian Journal of Clinical and Experimental Hypnosis, 14*, 1–14.
- Edmonston, W. E., Jr., & Moscovitz, H. C. (1990). Hypnosis and lateralized brain functions. *International Journal of Clinical and Experimental Hypnosis, 38*, 70–84.
- Eliseo, T. S. (1974). Three examples of hypnosis in the treatment of organic brain syndrome with psychosis. *International Journal of Clinical and Experimental Hypnosis, 22*, 9–19.
- Elsner, J. B., & Tsonis, A. A. (1992). Nonlinear prediction, chaos, and noise. *Bulletin of the American Meteorological Society, 73*, 49–60.

- Freeman, W. J. (1994). Role of chaotic dynamics in neural plasticity. In J. Van Pelt, M. A. Corner, H. B. M. Uylings, & F. H. Lopes Da Silva (Eds.), *Progress in brain research* (pp. 319–333). New York: Elsevier Science.
- Freeman, W. J., & Skarda, C. A. (1985). Spatial EEG patterns, non-linear dynamics and perception: The neo-Sherringtonian view. *Brain Research Reviews*, *10*, 147–175.
- Friedman, H., Taub, H. A., Sturr, J. F., Church, K. L., & Monty, R. A. (1986). Hypnotizability and speed of visual information processing. *International Journal of Clinical and Experimental Hypnosis*, *34*, 234–241.
- Germana, J., & Lancaster, R. (1995). Brain dynamics, psychophysiological uncertainty and behavioral learning. *Integrative Physiological and Behavioral Science*, *30*, 138–150.
- Glass, L., Goldberger, A. L., Courtemanche, M., & Shrier, A. (1987). Nonlinear dynamics, chaos and complex cardiac arrhythmias. *Proceedings of the Royal Society of London A*, *413*, 9–26.
- Gleik, J. (1987). *Chaos: Making a new science*. London: Sphere Books, Macdonald & Co.
- Graffin, N. F., Ray, W. J., & Lundy, R. (1995). EEG concomitants of hypnosis and hypnotic susceptibility. *Journal of Abnormal Psychology*, *104*, 123–131.
- Graham, C., & Evans, F. J. (1977). Hypnotisability and the deployment of waking attention. *Journal of Abnormal Psychology*, *86*, 631–638.
- Graham, K. R., & Pernicano, K. (1979). Laterality, hypnosis, and the autokinetic effect. *American Journal of Clinical Hypnosis*, *22*, 79–84.
- Gruzelier, J., & Warren, K. (1993). Neuropsychological evidence of reductions on left frontal tests with hypnosis. *Psychological Medicine*, *23*, 93–101.
- Gutierrez, E., & Almirall, H. (1989). Temporal properties of some biological systems and their fractal attractors. *Bulletin of Mathematical Biology*, *51*, 785–800.
- Gutierrez, S., & Corsi-Cabrera, M. (1988). EEG activity during performance of cognitive tasks demanding verbal and/or spatial processing. *International Journal of Neuroscience*, *42*, 149–155.
- Hogan, M., MacDonald, J., & Olness, K. (1984). Voluntary control of auditory evoked responses by children with and without hypnosis. *American Journal of Clinical Hypnosis*, *27*, 91–94.
- Hughes, J. R. (1982). *EEG in clinical practice*. Boston: Butterworths.
- Jackson, J., & Sheehan, P. W. (1986). Imaginative capacity and individual differences in hypnotic responsivity. *Australian Journal of Clinical and Experimental Hypnosis*, *14*, 139–152.
- Jansen, B. H. (1996). Nonlinear dynamics and quantitative EEG analysis. In R. M. Dashieff & D. J. Vincent (Eds.), *Frontier science in EEG: Continuous waveform analysis* (pp. 39–56). Elsevier Science.
- Jasiukaitis, P., Nouriani, B., Hugdahl, K., & Spiegel, D. (1997). Relateralizing hypnosis: Or, have we been barking up the wrong hemisphere? *International Journal of Clinical and Experimental Hypnosis*, *45*, 158–177.

- Jasiukaitis, P., Nouriani, B., & Spiegel, D. (1996). Left hemisphere superiority for event-related potential effects of hypnotic obstruction. *Neuropsychologia*, *34*, 661–668.
- Johnson, K., & Korn, E. R. (1980). Hypnosis and imagery in the rehabilitation of a brain-damaged patient. *Journal of Mental Imagery*, *4*, 35–39.
- Jutai, J., Gruzelier, J., Golds, J., & Thomas, M. (1993). Bilateral auditory-evoked potentials in conditions of hypnosis and focused attention. *International Journal of Psychophysiology*, *15*, 167–176.
- Karlin, R. A. (1979). Hypnotizability and attention. *Journal of Abnormal Psychology*, *88*, 92–95.
- Kertesz, A. (1994). Localization and function: Old issues revisited and new developments. In A. Kertesz (Ed.), *Localization and neuroimaging in neuropsychology* (pp. 1–33). New York: Academic Press.
- King, C. (1996). Fractal neurodynamics and quantum chaos: Resolving the mind–brain paradox through novel biophysics. In E. R. MacCormac & M. I. Stamenov (Eds.), *Fractals of brain, fractals of mind. In search of a symmetry bond* (pp. 179–233). Philadelphia: John Benjamin.
- Klass, D. W., & Westmoreland, B. F. (1996). Electroencephalography: General principles and adult electroencephalograms. In J. R. Daube (Ed.) *Clinical neurophysiology* (pp. 73–103). Philadelphia: F. A. Davis.
- Kolb, B., & Whishaw, I. Q. (1990). *Fundamentals of human neuropsychology*. New York: W. H. Freeman.
- Kowalik, Z. J., & Elbert T. (1994). Changes of chaoticness in spontaneous EEG/MEG. *Integrative Physiological and Behavioral Science*, *29*, 270–282.
- Kunzendorf, R. G., & Boisvert, P. (1996). Presence vs. absence of a “hidden observer” during total deafness: The hypnotic illusion of subconsciousness vs. the imaginal attenuation of brainstem evoked potentials. In R. G. Kunzendorf, N. P. Spanos, & B. Wallace (Eds.), *Hypnosis and imagination* (pp. 223–234). Amityville, NY: Baywood.
- LaClave, L. J., & Blix, S. (1989). Hypnosis in the management of symptoms in a young girl with malignant astrocytoma: A challenge to the therapist. *International Journal of Clinical and Experimental Hypnosis*, *37*, 6–14.
- Lagerlund, T. D. (1996). Electricity and electronics in clinical neurophysiology. In J. R. Daube (Ed.), *Clinical neurophysiology* (pp. 3–17). Philadelphia: F. A. Davis.
- Lampton, C. (1992). *Science of chaos*. Sydney: Venture.
- Lassen, N. A., & Holm, S. (1992). Single photon emission computerized tomography (SPECT). In J. C. Mazziotta & S. Gilman (Eds.), *Clinical brain imaging: Principles and applications* (pp. 108–134). Philadelphia: F. A. Davis.
- Le Page, K. E., & Goldney, R. D. (1989). Delayed onset traumatic amnesia: Recall with state-dependent stimulus and hypnosis. *Australian Journal of Clinical and Experimental Hypnosis*, *17*, 89–92.
- Lehr, E. (1990). A developmental perspective. In E. Lehr (Ed.), *Psychological management of traumatic brain injuries in children and adolescents* (pp. 41–98). Rockville, MD: Aspen.

- London, P. (1976). Kidding around with hypnosis. *International Journal of Clinical and Experimental Hypnosis*, 24, 105–121.
- London, P., & Cooper, L. M. (1969). Norms of susceptibility in children. *Developmental Psychology*, 1, 113–124.
- Lund, L. F., Mosekilde, E., & Hansen, J. (1993). Chaos in a model of HIV infection of the immune system. In P. L. Christiansen et al. (Eds.), *Future directions of nonlinear dynamics in physical and biological systems* (pp. 499–508). New York: Plenum Press.
- Luria, A. R. (1973). *The working brain. An introduction to neuropsychology*. London: Penguin.
- Lutzenberger, W., Preissl, H., & Pulvermueller, F. (1995). Fractal dimension of electroencephalographic time series and underlying brain processes. *Biological Cybernetics*, 73, 477–482.
- Lynn, S. J., & Rhue, J. W. (1991). Theories of hypnosis: An introduction. In S. J. Lynn & J. W. Rhue (Eds.), *Theories of hypnosis: Current models and perspectives* (pp. 1–15). New York: Guilford.
- MacCormac, E. R. (1996). Fractal thinking: Self-organizing brain processing. In E. R. MacCormac & M. I. Stamenov (Eds.), *Fractals of brain, fractals of mind. In search of a symmetry bond* (pp. 127–154). Philadelphia: John Benjamin.
- Manganiello, A. J. (1986). Hypnotherapy in the rehabilitation of a stroke victim: A case study. *American Journal of Clinical Hypnosis*, 29, 64–68.
- Marucci, F. S., De Pascalis, V., Penna, M. P., & Pessa, E. (1989). 40-Hz EEG and hypnotizability during mental activity. In V. A. Gheorghiu, P. Netter, H. J. Eysenck, & R. Rosenthal (Eds.), *Suggestion and suggestibility: Theory and research* (pp. 205–219). New York: Springer-Verlag.
- May, R. (1989). The chaotic rhythms of life. *New Scientist*, 118, 21–25.
- McCormack, K., & Gruzelier, J. (1993). Cerebral asymmetry and hypnosis: A signal detection analysis of divided visual field stimulation. *Journal of Abnormal Psychology*, 102, 352–357.
- McKenna, T. M., McMullen, T. A., & Shlesinger, M. F. (1994). The brain as a dynamic physical system. *Neuroscience*, 60, 587–605.
- Meszáros, I., Crawford, H. J., Szabo, C., Nagy-Kovaks, A., & Revesz, Z. (1989). Hypnotic suggestibility and cerebral hemisphere preponderance: Verbal-imaginal discrimination task. In V. A. Gheorghiu, P. Netter, H. J. Eysenck, & R. Rosenthal (Eds.), *Suggestion and suggestibility: Theory and research* (pp. 191–203). New York: Springer-Verlag.
- Michel, C. M., Lehmann, D., Henggeler, B., & Brandeis, D. (1992). Localization of the sources of EEG delta, theta, alpha and beta frequency bands using FFT dipole approximation. *Electroencephalography and Clinical Neurophysiology*, 82, 38–44.
- Miller, R. (1991). *Cortico-hippocampal interplay and the representation of contexts in the brain*. New York: Springer-Verlag.
- Milos, R. (1975). Hypnotic exploration of amnesia after cerebral injuries. *International Journal of Clinical and Experimental Hypnosis*, 23, 103–110.

- Mizuki, Y., Tanaka, M., Isozaki, H., Nishijima, H., & Inanaga, K. (1980). Periodic appearance of theta rhythm in the frontal midline area during performance of a mental task. *Electroencephalography and Clinical Neurophysiology*, *49*, 345–451.
- Moore-Ede, M. C., Sulzman, F. M., & Fuller, C. A. (1982). *The clocks that time us*. Cambridge, MA: Harvard University Press.
- Morgan, A. H., & Hilgard, J. R. (1978). The Stanford Hypnotic Scale for Children. *American Journal of Clinical Hypnosis*, *21*, 148–169.
- Nakagawa, Y. (1988). Continuous observations of daytime EEG patterns in normal subjects under restrained conditions while sitting in an armchair or on a stool: 2. Awake state. *Japanese Journal of Psychiatry and Neurology*, *42*, 247–264.
- Olsen, L. F., Truty, G. L., & Schaffer, W. M. (1988). Oscillations and chaos in epidemics: A nonlinear dynamic study of six childhood diseases in Copenhagen, Denmark. *Theoretical Population Biology*, *33*, 344–370.
- Otto-Salaj, L. L., Nadon, R., Hoyt, I. P., Register, P. A., & Kihlstrom, J. F. (1992). Laterality of hypnotic response. *International Journal of Clinical and Experimental Hypnosis*, *40*, 12–20.
- Parker, J. L. (1979). The use of hypnosis to reinstate a child's impaired writing performance resulting from neurological damage. *Australian Journal of Clinical and Experimental Hypnosis*, *7*, 225–230.
- Pekala, R. J., & Kumar, V. K. (1989). Phenomenological patterns of consciousness during hypnosis: Relevance to cognition and individual differences. *Australian Journal of Clinical and Experimental Hypnosis*, *17*, 1–20.
- Perlini, A. H., Spanos, N. P., & Jones, B. (1996). Hypnotic negative hallucinations: A review of subjective, behavioral, and physiological methods. In R. G. Kunzendorf, N. P. Spanos, & B. Wallace (Eds.), *Hypnosis and imagination* (pp. 199–221). Amityville, NY: Baywood.
- Pezard, L., Martinerie, J., Breton, F., Bourzeix, J.-C., & Renault, B. (1994). Non-linear firecasting measurements of multichannel EEG dynamics. *Electroencephalography and Clinical Neurophysiology*, *91*, 383–391.
- Phelps, M. E. (1992). Positron emission tomography (PET). In J. C. Mazziotta & S. Gilman (Eds.), *Clinical brain imaging: Principles and applications* (pp. 71–107). Philadelphia: F.A. Davis.
- Pool, R. (1989). Is it healthy to be chaotic? *Science*, *243*, 604–607.
- Pradhan, N., & Dutt, N. D. (1993). A nonlinear perspective in understanding the neurodynamics of EEG. *Computers in Biology and Medicine*, *23*, 425–442.
- Pritchard, W. S., & Duke, D. W. (1995). Measuring: “chaos” in the brain: A tutorial review of EEG dimension estimation. *Brain and Cognition*, *27*, 353–397.
- Pritchard, W. S., Duke, D. W., Coburn, K. L., Moore, N. C., Tucker, K. A., Jann, M. W., & Hostetler, R. M. (1994). EEG-based, neural-net predictive classification of Alzheimer's disease versus control subjects is augmented by non-linear EEG measures. *Electroencephalography and Clinical Neurophysiology*, *91*, 118–130.
- Query, W. T., Carlson, K., & Dreyer, S. (1983). Neuropsychological test performance and hypnotic susceptibility. *Journal of Clinical Psychology*, *39*, 798–800.

- Ray, W. J. (1990). The electrocortical system. In J. T. Cacioppo & L. G. Tassinary (Eds.), *Principles of psychophysiology: Physical, social and inferential elements* (pp. 385–412). Cambridge: Cambridge University Press.
- Ray, W. J. (1997). EEG concomitants of hypnotic susceptibility. *International Journal of Clinical and Experimental Hypnosis*, *45*, 301–313.
- Rezvova, I. R., Frolov, A. A., & Markevich, V. A. (1995). An investigation of hippocampal theta rhythm of rats as a nonlinear dynamic process. *Neuroscience and Behavioral Physiology*, *25*, 419–426.
- Rossi, E. L. (1994). Ericksonian psychotherapy — Then and now: New fundamentals of the naturalistic utilization approach. In J. K. Zeig (Ed.), *Ericksonian methods. The essence of the story* (pp. 46–76). New York: Brunner/Mazel.
- Ruggieri, V., Capozzi, R., & Clavenzani, G. (1989). Perceptual styles in chromatic binocular rivalry, hypnotic susceptibility, and cerebral dominance. In V. A. Gheorghiu, P. Netter, H. J. Eysenck, & R. Rosenthal (Eds.), *Suggestion and suggestibility: Theory and research* (pp. 241–249). New York: Springer-Verlag.
- Sabourin, M. (1982). Hypnosis and brain function: EEG correlates of state-trait differences. *Research Communications in Psychology, Psychiatry and Behavior*, *7*, 149–168.
- Saccuzzo, D. P., Safran, D., Anderson, V., & McNeil, B. (1982). Visual information processing in high and low susceptible subjects. *International Journal of Clinical and Experimental Hypnosis*, *30*, 32–44.
- Saletu, B. (1987). Brain function during hypnosis, acupuncture and transcendental meditation. *Advances in Biological Psychiatry*, *16*, 18–40.
- Schacter, D. L. (1977). EEG theta waves and psychological phenomena: A review and analysis. *Biological Psychology*, *47*–82.
- Schnyder, D. M., & Allen, J. J. (1995). Attention-related electroencephalographic and event-related potential predictors of responsiveness to suggested posthypnotic amnesia. *International Journal of Clinical and Experimental Hypnosis*, *43*, 295–315.
- Sheehan, P. W., Donovan, P., & MacLeod, C. M. (1988). Strategy manipulation and the Stroop effect in hypnosis. *Journal of Abnormal Psychology*, *97*, 455–460.
- Sheer, D. E. (1970). Electrophysiological correlates of memory consolidation. In G. Ungar (Ed.), *Molecular mechanisms in memory and learning* (pp. 177–211). New York: Plenum Press.
- Sheer, D. E. (1976). Focused arousal and 40-Hz EEG. In R. M. Knight & D. J. Bakker (Eds.), *The neuropsychology of learning disorders* (pp. 71–87). Baltimore, MD.: University Park Press.
- Sheer, D. E. (1984). Focused arousal, 40-Hz EEG, and dysfunction. In T. Elbert, B. Rockstroh, W. Lutzenberg, & N. Birbaumer (Eds.), *Self-regulation of the brain and behavior* (pp. 64–84). Berlin: Springer-Verlag.
- Sheer, D. E. (1989). Sensory and cognitive 40-Hz event-related potentials: Behavioral correlates, brain function, and clinical application. In E. Basar & T. H. Bullock (Eds.), *Brain dynamics* (Vol 2, pp. 339–374). Berlin: Springer-Verlag.



- Singh, R., & Meng, Y. T. (1989). Hypnotisability, right-hemisphere dominance, and autonomic function. *Australian Journal of Clinical and Experimental Hypnosis*, *17*, 167–174.
- Smith, H. D., & Adams, J. C. (1976). Psychological or pseudo brain damage following head injury. *Journal of the American Institute of Hypnosis*, *17*, 70–73.
- Spiegel, D., & Vermuten, E. (1994). Physiological correlates of hypnosis and dissociation. In D. Spiegel (Ed.), *Dissociation: Culture, mind, and body* (pp. 185–209). Washington, DC: American Psychiatric Press.
- Stam, K. J., Tavy, D. L. J., Jelles, B., Achtereekte, H. A. M., Slaets, J. P. J., & Keunen, R. W. M. (1994). Non-linear dynamical analysis of multichannel EEG: Clinical applications in dementia and Parkinson's disease. *Brain Topography*, *7*, 141–150.
- Stewart, I. (1988). Beating hearts on the devil's staircase. *New Scientist*, *117*, 29.
- Stupfel, M., & Pavely, A. (1990). Ultradian circahoral and circadian structures in endothermic vertebrates and humans. *Comparative Biochemistry and Physiology*, *96*, 1–11.
- Sullivan, D. S., Johnson, A., & Bratkovitch, J. (1974). Reduction of behavioral deficit in organic brain damage by use of hypnosis. *Journal of Clinical Pathology*, *30*, 96–98.
- Swick, D., Kutas, M., & Neville, H. J. (1994). Localizing the neural generators of event-related brain potentials. In A. Kertesz (Ed.), *Localization and neuroimaging in neuropsychology* (pp. 73–121). New York: Academic Press.
- Tellegen, A., & Atkinson, G. (1974). Openness to absorbing and self-altering experiences ("absorption"), a trait related to hypnotic susceptibility. *Journal of Abnormal Psychology*, *83*, 268–277.
- Tiller, S. G., & Persinger, M. A. (1994). Enhanced hypnotizability by cerebrally applied magnetic fields depends upon the order of hemispheric presentation: an anisotropic effect. *International Journal of Neuroscience*, *79*, 157–163.
- Ulett, G. A., Akpınar, S., & Itil, T. M. (1972). Hypnosis: Physiological, pharmacological reality. *American Journal of Psychiatry*, *128*, 799–805.
- Vogel, W., Broverman, D. M., & Klaiber, E. L. (1968). EEG and mental abilities. *Electroencephalography and Clinical Neurophysiology*, *24*, 166–175.
- Wallace, B. (1986). Latency and frequency reports to the Necker cube illusion: Effects of hypnotic susceptibility and mental arithmetic. *Journal of General Psychology*, *113*, 187–194.
- Wallace, B., & Paterson, S. L. (1984). Hypnotic susceptibility and performance on various attention-specific cognitive tasks. *Journal of Personality and Social Psychology*, *47*, 175–181.
- Walsh, K. W. (1994). *Neuropsychology: A clinical approach*. Edinburgh: Churchill Livingstone.
- Walter, H., Podreka, I., Steiner, M., Suess, E., Benda, N., Hajji, M., Lesch, O. M., Musalek, M., & Pasccweg, V. (1990). A contribution to classification of hallucinations. *Psychopathology*, *23*, 97–105.



- Woodard, F. J. (1996). Hypnosis and phenomenological-perceptual psychology. *Journal of Clinical Psychology, 52*, 209–218.
- Yamamoto, S., & Matsuoka, S. (1990). Topographic EEG study of visual display terminal (VDT) performance with special reference to frontal midline theta waves. *Brain Topography, 2*, 257–267.
- Yanchar, R. J., & Johnson, H. J. (1981). Absorption and attitude towards hypnosis: a moderator analysis. *International Journal of Clinical and Experimental Hypnosis, 29*, 375–382.
- Zachariae, R., & Bjerring, P. (1994). Laser-induced pain-related brain potentials and sensory pain ratings in high and low hypnotizable subjects during hypnotic suggestions of relaxation, dissociated imagery, focused analgesia, and placebo. *International Journal of Clinical and Experimental Hypnosis, 42*, 56–80.
- Zamansky, H. S., & Clarke, L. E. (1986). Cognitive competition and hypnotic behavior: Whither absorption? *International Journal of Clinical and Experimental Hypnosis, 34*, 205–214.
- Zeltzer, L., Kellerman, J., Ellenberg, L., & Dash, J. (1983). Hypnosis for reduction of vomiting associated with chemotherapy and disease in adolescents with cancer. *Journal of Adolescent Health Care, 4*, 77–84.

## **HYPNOSIS AND RECURRENT MENSTRUAL HEADACHES**

**David G. Howsam**

*General Practitioner*

---

This case study illustrates the use of hypnosis as the only treatment in the cessation of a 20-year history of menstrual headaches in a 42-year-old woman. Detailed information of the five hypnosis sessions involved is provided. Prolonged follow-up over 13 years has revealed no recurrence of the presenting symptoms.

### **PRESENTING COMPLAINT**

Ms C was a patient of one of my colleagues in a group general practice. She referred herself to me when she heard I practised hypnosis. She wanted to know if hypnosis could help her with what she described as her “migraine attacks.”

She described a 20-year history of severe headaches that occurred every month on the third or fourth day of her period. This headache would begin suddenly with right-sided neck pain that radiated up the neck to give her a “lump-like” feeling at the base of her skull. The pain then travelled from this occipital region over the top of her head to her forehead and behind her eyes (most commonly, the right eye). Ms C described this as “a severe, dull, constant ache” which lasted two to three days before suddenly disappearing. While the headache persisted she was “unable to do anything” and almost invariably she had to have one or two days off work each month because of it. If she did manage to go to work, her efficiency was severely diminished.

These headaches had apparently begun when she was 22 years old, after having a laparotomy for removal of a large benign ovarian cyst. There had been no nausea, vomiting, classical aura, or photophobia associated with these headaches. Ms C had seen many doctors, including a neurologist and a gynaecologist. She had received a variety of diagnoses, including migrainous, hormonal and tension headache, or a combination thereof. Many medications

---

Requests for reprints should be sent to D. Howsam, 2 Macauley Street, Leichardt, N.S.W. 2040.

had been unsuccessfully tried including migraine preparations, analgesics, and hormonal treatments. Ms C could not tolerate the oral contraceptive pill owing to many side effects, especially menorrhagia. She found oral analgesia unhelpful and preferred to do without. Intramuscular pethidine relieved the pain for some hours but left her feeling nauseous, “drugged” and strange. At presentation her periods were regular, occurring every 28 days, bleeding five to seven days. She experienced heavy bleeding for the first two to three days and as her bleeding eased, so her neck symptoms would herald the onset of her headache.

## **PERSONAL HISTORY**

Ms C lived by herself in her own home unit. She told me she had been happily divorced for five years and had no children. She described her one marriage, which lasted six years, as “a mistake.” Ms C was born and educated in Sydney. She was the only child of Australian middle-class parents, to whom she was still close, in fact living in the same suburb. She was educated to Year 12 level and worked as a secretary throughout her working life, culminating in her position as executive secretary. Ms C described herself as single, happy, and very good at what she did (secretarial work). Her social life was busy but she had no special relationship and was not concerned by this. One of the main reasons for her seeking further help for her headache was that, although she had an understanding boss, she felt her almost monthly work absences were very unprofessional. She had no particular religious affiliations.

Past medical history included tonsillectomy at age 15, ovarian cystectomy at 22, surgical removal of two basal-cell carcinomas, hay-fever and diagnostic laparoscopy at 32 years. This latter surgery was performed as an infertility investigation and no abnormality was detected; however she still continued to see her gynaecologist regularly. Ms C had no history of psychological or psychiatric problems. There was no family history of mental disorder. Her father suffered from mild ischaemic heart disease and glaucoma.

Ms C presented as a well-groomed woman of stated age, slightly underweight and usually dressed immaculately in conservative business suits. She was at ease during our sessions, communicating freely with obvious confidence. Ms C had a long association with the Toastmasters public-speaking group, in which she held high office. Routine medical examination was completely normal. There were no signs of anxiety depression or other psychiatric illness.

## **HYPNOTIC SUITABILITY**

I explained to Ms C that there was a long tradition of using hypnosis in treating pain (Barber & Adrian 1982, Hilgard & Hilgard 1975) and that it had been successfully used in migraine headaches where other treatments had been unsuccessful. Here I accepted and utilised her label for these headaches as migraines without offering my own diagnosis. I explained that each case was

individual, however, and that success depended on many factors, which we would need to evaluate. In assessing her abilities for hypnosis I was, at that time, using the Tellegen Absorption Scale, a modified HIP, and associated hypnotic experiences, not only to assess abilities but also to induce trance. Ms C had experience with yoga and in the practice of yoga nidra she could achieve deep relaxation, shutting out external noises and holding in her mind visual imagery such as a lotus flower. She knew she thought in pictures and easily got involved with a beach-scene image. Ms C believed she had ESP with her intuition warnings and she also had strong beliefs about her personal guardian angel. Eye-gaze, roll and closure was four out of four (4/4) without squint. Arm levitation was achieved with ease, as were general comfort and altered hand sensations. Thus it was assumed that Ms C was at least moderately hypnotisable and that her condition was amenable to attempts at hypnotic intervention. Ms C was keen to try hypnosis.

### **GOALS OF HYPNOTHERAPY**

1. To increase her ability to deal with her menstrual headaches so that her life (especially work) would be less disrupted.
2. To uncover any original cause (especially related to previous surgery) or secondary gain from these headaches.
3. To teach her self-hypnosis to deal with headaches.
4. To use hypnotic analgesic techniques with a view to ending or ameliorating her symptoms. While these were my goals of therapy, I merely asked Ms C to be curious as to how her unconscious would utilise the hypnotic sessions for her benefit.

### **HYPNOTIC SESSIONS**

There were five hypnotic sessions after the initial assessment interview.

#### **Session 1**

The aim of this session was to introduce hypnotic induction, deepening, self-hypnosis, and preparation for hypnotic pain management. I explained to Ms C that the experience of hypnosis was similar to the experience she was already familiar with in 'yoga nidra.'

After prolonged body relaxation with her eyes open, induction was completed with eye fixation, eye roll, and eye closure. Deepening of trance was effected by a number of techniques, especially using Vogt's fractionation method (VFM). This latter technique, which I used repeatedly during the session, was intended not only to deepen trance but to gather information as to her hypnotic experience, to judge hypnotic depth, and to lay the foundations for post-hypnotic suggestions. Deepening was further induced by counting down 10 steps (she imagined an open concrete staircase) to a beautiful place in nature (she

visualised a garden with a restful area of green grass). After counting had ceased she was taken through a tunnel to a beach (previously identified as a special place), deepened by counting 4 to 1, imagining waves washing into the beach and running out for each number drawn on the sand.

Vogt's fractionation method was repeated using post-hypnotic suggestion (PHS) for deepening (preparing the way for speaking in hypnosis). This was followed by eye fixation and then, with further counting, eye closure. Right-shoulder touch was suggested during one of these deepenings as a signal for rapid induction.

Hypnotic treatment was begun with prolonged ego-strengthening (modified Hartland, 1982) and with specific healing suggestions for her head, neck and hormonal balance.

Ideomotor signalling was established with index finger and thumb movements of the right hand. Exploration of her symptoms followed. Unconscious signalling indicated that the symptoms began two years after the surgery (when she was 22 years old) and was unrelated to it. Unconscious signalling revealed no memory of the beginnings of these headaches, and replied "yes" to the question, "Is this symptom now just a habit?" Agreement was gained from the unconscious that it was "okay" to heal these headaches. Multiple suggestions were then given, from which the unconscious could choose in order to help Ms C in the most rapid and thorough manner. Such suggestions included: "You can turn down the intensity of the feelings ... you can change the feelings ... feel the feelings, but not be bothered by them ... cover the feelings ... disperse the symptoms all over the body, diluting them ... ignore the feelings as they were an unnecessary habit ... be away from the feelings," etc.

The session was finished by a further VFM and laying the foundations for the teaching of self-hypnosis. PHS was utilised for "easier, quicker and deeper hypnotic trance each time you visit this trance chair" and "you'll be more and more curious about the benefits self-hypnosis will bring you." After termination of the trance, Ms C was debriefed for the session. It was clear she had spontaneous amnesia for much of the session. She also had experienced dissociation ("feelings of being out of my body") and altered sensations, including spontaneous anaesthesia, "feeling nothing of my body from my chest down."

## **Session 2**

I arranged for Ms C's next appointment to be at the start of her next period. It occurred on the third day of bleeding. She had no neck pain or headache before this visit. She complained of some lower abdominal pain and was using the non-steroidal anti-inflammatory Naprogesic, as well as massage, to treat this. She remembered the last session as feeling very relaxed, recalling walking down steps to a very bright beach, but felt more relaxed in the cooler, darker garden scene.

Hypnosis was induced with a shortened body relaxation script, eye fixation, eye closure followed by walking down 10 concrete steps to “the garden.” Further deepening was added by visualising “the stream,” dropping 3 – 2 – 1 leaves down this stream of hypnosis, then counting down (backwards from 300) while walking down a path by this stream. Using VFM, opening her eyes in trance, she reported feelings of “being gone completely,” “my arms didn’t belong to me,” “my fingers and hands felt bent.” Three positive anchors were anchored to her right forearm and hypnosis was further deepened with eye closure and right shoulder pressure. Ideomotor finger signals were again induced, and the NLP 6-step unconscious reframing procedure was executed for the part that ran the symptoms (“whether now or any time in the past”). This procedure was to manage any lingering secondary gain for her symptoms.

Before bringing her out of hypnosis, ego-strengthening and general healing suggestions were given. Again post-hypnotic suggestions for deepening hypnosis and self-hypnosis were given.

### **Session 3**

I saw Ms C again one week after the second session. She had experienced no headache and, in fact, reported feeling very relaxed in the previous week. Induction proceeded as per the second session but was less elaborate. Direct hypnotic sessions were given to confirm “that her former symptoms were now permanently gone.” This was followed by the “migraine headache” treatment modified from J. Barber’s (1996) work:

I don’t know why you had this problem It was certainly persistent, perplexing ... fascinating. There is no obvious current psychological problem underlying it, and if there ever was, that problem is long past. It was a conditioned response, and now because of this work, it can go completely away. Because of this relaxation you are becoming more and more sensitive to your body. More and more you will be able to notice the warning signals occurring before the neck discomfort that would herald those headaches. These warning signals will be more obvious and you’ll be more aware of them. The rest will happen automatically ... as soon as you feel those cue symptoms, that will signal that you need to take time out to immediately do the following. You will find a safe and quiet place ... tell all those around you that you need time to be alone. You don’t even have to remember these things, as they will happen automatically as soon as you feel these cue feelings coming on. You will immediately feel you’re ready to go into a trance, you’ll fix your eyes on some object and as your eyes close your breathing will take you deeper as you relax profoundly. You will walk down your steps to your garden and as you sit on that grassy bank, you will feel completely relaxed. As you dip that right hand into the stream, that wonderful cool comfort will wash up that arm, shoulder and neck, and then all over the body. As you feel this comfort you know you are not going to get a headache so you’ll continue to relax and

take at least 10 minutes and preferably 20 to 30 minutes of complete relaxation. To learn this thoroughly you can practise this self-hypnosis twice every day.

The above script was extended and the crucial paragraphs repeated three or four times. Before ending hypnosis, suggestions were given for prolonged ego-strengthening (PES), as previously mentioned, and protection against non-professional hypnosis.

#### **Session 4**

Ms C was seen one month later, at the time of her next period. Her period had just finished and she had had no headache. She had used rapid self-hypnosis during the days at work and again at night. She told me that she felt extremely well during her period, in fact “radiant.” She felt her hayfever had improved, and she had given up coffee, drinking more water. Ms C reported some slight headache one week before her period, but it was “nothing too bothering.”

Hypnotic induction was begun with right-hand levitation, with the hand reaching to touch her face. Trance was deepened by hand lowering, then the visualisations of “the steps” to “the garden” and “the stream,” followed by “the walk into hypnosis,” were applied. Hypnotic therapy centred on hypnotic analgesic techniques. Alterations of sensations were induced, with feelings of lightness and floating in her right hand. Visualisation was then introduced by “floating on a cloud” to “the hut in the snow.” After a walk in the snow, numbness in the right hand was developed by imagining holding snow in that hand. This numbness was increased by imagining local-anaesthetic injections around the right wrist, together with the induction of classic glove anaesthesia. Using levitation this numbness was transferred to her neck and head and back again to her right hand. After successful development and transfer of hypnotic analgesia, further suggestions were given for “new learnings and neural connections developing effortlessly and permanently to support and maintain the new healings learnt since your therapy began.”

Ms C was amnesic for all analgesic work after beginning her “walk in the snow.” She was brought out of hypnosis by reversing the hypnotic processes and giving the usual post-hypnotic suggestion.

#### **Session 5**

Ms C was next seen for follow-up some three and a half months later. She had had no further menstrual headaches or work absences since her last visit. She was extremely pleased with the result. This appointment was made to deal with any further matters that may have been left unattended or had developed anew. No such problems were identified.

The hypnotic session began with naturalistic induction and deepening as described in Session 4. IMS were developed and unconscious signalling

confirmed that it was “okay” that her previous symptoms were now completely removed. Through visualisation her “safe place” was created and within this safe place her “healing centre” was also developed. In this centre (a spa of healing waters and vapours) it was suggested that her calmness was so profound that her own endorphins were greatly enhanced to cause an even deeper sense of comfort. This safe place and healing centre were then added to her self-hypnosis script.

After coming out of hypnosis, she reported visual distortions behind her eyes, together with comfort, warmth, and a floating feeling (“like there was no chair under me”).

## **EPILOGUE**

I continued to see Ms C for general practice matters over the following six years. These included her journey through the menopause and her father’s death.

She no longer suffered from her past headaches, however at the time of her father’s death she presented on one occasion with visual disturbance of migraine equivalents, without any headache. She left for England as part of her employment. There she married and remained.

Ms C still comes to visit me when she returns to Australia to visit her mother. She remains happily married and 13 years after our hypnotic sessions she remains headache free.

Hypnotic intervention can be a very useful technique in the treatment of migrainous headache, as has been confirmed by a number of authors and as is well known to hypnotherapists. Hence it is with some regret that I note that hypnosis is rarely if ever mentioned in the general medical scene, as a treatment for migraine or headache.

## **REFERENCES**

- Barber, J. (1996). *Hypnotic suggestion in the treatment of pain: A clinical guide*. New York: W. W. Norton.
- Barber, J. & Adrian, C. (Eds.).(1982). *Psychological approaches to the management of pain*. New York: Brunner/Mazel.
- Hilgard, R. H. & Hilgard, J. R. (1975). *Hypnosis in the relief of pain*. Los Altos, CA: William Kaufman.



## **THE CASE OF HOW THE BOOGIE MAN DISAPPEARED**

**Anastasia Contos**

*Psychologist*

---

Ben was an 11-year-old boy referred by a general practitioner for a sleeping disorder and night-time fears. He was treated with hypnosis over two sessions with the goals of lowering his anxiety as well as freeing him from taking emotional responsibility for his parents and his sister. Hypnotherapy, using direct techniques, was successful in helping Ben overcome his sleeping problem. The indirect hypnotic technique of storytelling was utilised to help Ben individuate and become free of the emotional burden he carried for his mother, father and sister. Therapy was terminated as soon as the presenting problem was resolved and some of the underlying emotional issues had been dealt with. Overall, therapy was a positive experience for Ben and he felt hypnosis had helped him to master his problems. His mother was also relieved that Ben's fear of a boogie man in the heating ducts had vanished, together with his generalised anxiety. As a result, the whole family was able to sleep better at night.

Ben, an 11-year-old boy, was referred for therapy by his general practitioner, noting in his request for a consultation: "Ben has developed night-time fears over the last four months. His mother would appreciate any help you can offer."

### **TREATMENT**

Treatment consisted of the following sessions:

1. First assessment session with Ben and his mother.
2. Sole session with Ben and beginning of hypnotic treatment.
3. Sole session with Ben's mother.
4. Second session of hypnotic treatment with Ben.
5. Family session.
6. Telephone follow-up.

---

Requests for reprints should be sent to Anastasia Contos, 13 Durham Street, Eaglemont, Victoria 3084.

## **Session 1**

Ben and his mother (Mrs Smith) attended the first consultation on 24 July 1997. Goals for this session were to make an assessment of Ben's sleeping problem and to determine whether hypnosis was an appropriate treatment strategy.

The first part of the session was spent developing rapport with Ben, talking to him about his school and his interests. Ben loved school, loved sport and writing, and was a Bombers supporter. He attended a local grammar school and was currently in grade 6. He spoke fondly of his teacher. We explored his perception of the problem. Ben seemed to be a bright, articulate, and endearing young boy who was feeling overwhelmed by anxiety at night-time. He spoke like an adult about his problem: "I feel paranoid when I go to bed. If I hear a bump. I've always liked going straight to sleep. I don't like it when I'm not asleep. Normally I wait it out. I call Mum if I have to wait a long time. On average I wake Mum up once every one and a half weeks." His mother laughed at the end of this statement as she was being woken up several times a night. She added that Ben was scared there was something or someone, "the boogie man," in the heating duct and expressed concern that Ben was developing more fears, that they were becoming pervasive, and that the fears had something to do with her relationship with Ben.

Ben's mother told me the family had moved into their new home eight months previously, in the suburb where her husband had originally grown up. Their home was built on a subdivision next to his parents' home. The house was new and still settling and creaking but Ben's sleep disturbance seemed to be becoming progressively worse. Apart from the family's move into their new home there seemed to be no other precipitating event leading to Ben's anxiety and sleep problem.

## **Family Background**

Mrs Smith was a reserved and well-spoken 46-year-old woman who worked in the sales and service department of a motoring organisation. Her hours of work fitted in with the school day, "so the children do not even realise I am at work." Mr Smith was 41 years of age and a trained chemical engineer, now working as a consultant. Mrs Smith described her husband as a "scientist who lives in an ivory tower." In contrast to her husband, Mrs Smith described herself as a "pragmatist." In passing, Mrs Smith mentioned that her husband suffered from ulcerative colitis and that the medication he was on has made him sterile. She stated that he was supportive of Ben in all of his sporting activities and a good provider for the family but otherwise he was a busy man who did not have much time for the family. Mrs Smith felt that she was more affectionate with her children and more demonstrative than her husband, who came from a family that did not show their feelings.

The couple had participated in marital counselling six years previously and Mrs Smith had been treated with hypnosis for a weight problem. She reported

that the hypnosis had taught her how to relax but had not solved her weight problem. There still seemed to be some marital tensions and communication problems but Mrs Smith seemed resigned to accept things that she could not change.

The couple had two children: a daughter Sara, aged 12, who attended a local public school, and Ben, aged 11, who attended a private boys' school. Sara had been attending a girls' school for three years but had left because the girls were "horrible" to her and she had also been failing. Sara was now having a wonderful time at the high school and performing well academically.

### **Process of Therapy**

In the first session, Ben was asked: "If you had a lemonade bottle with your worries in it, how full would that bottle be?" He answered that it would be half full. When asked what those worries were, he said that one-quarter of his worries were about sleep and the rest were about school. It seemed that worries about school dominated his life and may even have contributed to the sleep problem. Ben revealed that he had been "the joker" at the school and, since the beginning of the year, "a big shipment" of boys had arrived from the local primary school. One particular boy had taken Ben's spot as the joker and was very popular. "Some boys prefer him. He does what I do but he does it better." Consequently Ben felt misplaced and pushed out of the limelight.

Mrs Smith's perception of the situation was explored. She added: "This year at school has been quite a shock to him. He's not an officer at the school. Most of his friends are school officers. Next year he will mix with the bigger school which might be better. It can become quite incestuous at private schools."

School bullying as a problem was investigated, but he said that he had never been bullied.

If there were three wishes that could come true, for Ben they were: first that he could "get some money for mum"; second, "my problem is solved"; and third, that "I could play for the Australian cricket team when I am older."

### **Medical History**

Ben was an attractive and slightly built boy. There were no medical problems and no history of psychiatric problems in the family. Ben's developmental history was unremarkable and he reached his developmental milestones without any problems. There were no incidents of school fears earlier in Ben's developmental history.

### **Sibling Relationship**

According to Mrs Smith, Ben often tormented Sara so Sara fought back. Ben also preferred to have company whereas Sara liked to be left alone. He revealed that he respected his sister because "she has got guts and she's nice to me. She

is just Sara.” Sara has diabetes (she needs two insulin injections a day) and heart problems. She was diagnosed with diabetes when she was seven years old and had her first heart operation as a baby, having three operations in all. Mrs Smith stated that the family’s dealing with Sara’s health problems has made it very hard for Ben. Sara coped well because she was a “pragmatic child” but Ben spent a lot of time worrying.

### **Intervention**

The use of hypnosis was discussed with Mrs Smith and Ben, with the explanation that it could possibly give him the tools to overcome his fears. Mrs Smith was very positive despite the failure of hypnosis in the treatment of her weight problem. She realised that it depended a lot on her motivation, which had been lacking regarding her weight problem, but she was willing to try anything in order to help her son. “We were very close. I don’t want to smother him. What might I be doing/not doing? I need to know.”

The following broad indications for the use of child hypnotherapy were met in this case (Olness & Gardner, 1988).

1. When a problem has been shown to be treatable through hypnosis.
2. When there is a positive relationship between the therapist and child.
3. When the child possesses at least some motivation to remedy the complaint.
4. When parents approve the treatment plan.
5. When the use of hypnosis is not anticipated to cause iatrogenic harm.

Ben was asked to draw a picture of his fears, to close his eyes and imagine how he would show that fear in colours, lines, shapes, or symbols. In the words of Oaklander (1978), “Drawing is an excellent medium for getting into the fear” (p. 242).

As the session was concluding, there was not enough time to discuss the meaning of the drawing with Ben, thus he was told his fears would be put away in a cardboard box with his name on it and locked up in the consulting room. There was immediate relief on Ben’s face. In work with children, there is a need for children to feel safe and to feel that the consulting room is a safe place for them (Scott, 1995).

Ben was also asked to conduct an experiment by having the radio off one night and on each alternate night. He was to investigate the difference in his sleep under the different conditions. Permission was sought from mother and son to speak to Ben’s teacher and to liaise with the doctor.

### **Working Diagnosis**

Ben’s fears and the ensuing sleeping problems seemed to be linked to problems that Ben experienced with his peers at school as well as to problems in family dynamics.

1. Mr and Mrs Smith had experienced marital difficulties for many years which were still unresolved.
2. Mrs Smith reported that Mr Smith was emotionally distant from the family.
3. She commented on the intensely close relationship she had with her son and the effect on this relationship of her daughter's critical health problems that put her life at risk.

It appeared that Ben was carrying an enormous emotional burden and that he felt responsible for his parents' happiness and for his sister's wellbeing as well as fearing separation from his mother. The working hypothesis was that Ben feared being responsible for all his family members and not the "boogie man in the heating duct." The actual fear or anxiety was displaced onto the "boogie man."

The therapist's aim was to get close to the source of Ben's fears, to use hypnotic imagery to increase his feelings of confidence and safety, and to help him gain the strength he needed to cope and to deal with the problem. The therapist also wanted to involve Ben's parents and his sister in his treatment. However, the presenting problem had to be treated first.

## **Session 2**

Two appointments were cancelled on the day because Ben was feeling ill with abdominal pain. Mrs Smith was hoping that it was not psychological, a form of school refusal. The doctor's diagnosis was that it was severe constipation and prescribed Mylantin which provided the cure. On 4 August 1997 Ben was seen on his own. His mother dropped him off at the front door and there were no separation problems. Ben was smiling and seemed happy to attend the session by himself. The results of the "experiment" which he was instructed to conduct at the end of the first session were discussed. As a result of his observations, Ben had discovered that the radio made no difference to the sleep problem. He had also discovered that it was easier to go to sleep on weekends. On school nights the fears came back: "I need the radio sometimes if I get fidgety."

One night the cat slept on his bed and he thought that caused his problem but there was no difference without the cat. As a result of Ben's observations it was apparent that his anxieties about school contributed to his sleep disturbance.

We then talked about the fears that had taken over his life and looked at Ben's drawing of his fears. His fears were pervasive and involved many unresolved family issues as well as marital conflict between his parents.

Ben had drawn his head with a cartoon caption with the thought: "It is all in the mind." Above his head were wobbly concentric circles drawn in different colours, which was an abstract way of drawing his fears. Ben was asked what each line meant.

The fear represented by the black line was: "if anything happened to my family. If Mum or Dad got sick and they might die." It also included the fear

that “people might start not liking me at school.” The next fear in the wobbly concentric circle of fears, as depicted by the brown line, was “if anybody broke up my family. If Mum left Dad.” The purple line symbolised the fears that Ben had for his sister’s life: “if my sister got lost because she has diabetes. If she dies. They might say we can’t fix your disease, you might die. I used to want to be a scientist to find a cure for diabetes. I talk about it with my friends and teachers at school. She’s brave and takes two injections. I used to be very afraid I might get diabetes.”

Ben expressed connection to his sister and genuine concern for her life as well as the worry he had about his own health and inherited genes. It appeared Ben suffered from “survivor guilt,” that he was the healthy child in the family and that his sister had inherited all the illnesses. Despite his own apparent good health, Ben felt vulnerable.

Furthermore, there was a fear that the family might lose their financial status, as shown by the green line. “If my dad lost his job. I’m always worried we won’t have enough money. There were times when we were just well off. Times when we were very well off. Now we’re in the middle.”

This fear seemed to be connected with Ben worrying that he might be taken away from grammar school if his parents could not afford to send him, and he was scared that he might lose his good friends. (His mother had informed me that her in-laws had been very generous to her and her husband financially as well as having given them the land to build their home on. Possibly Ben was aware that his parents’ financial security depended on help from their parents.)

Ben could not remember what the blue line depicted, nor the orange line. I commented that this was positive. “Maybe the fears have started to disappear.”

I then talked to Ben about his fears, telling him that behind every fear was a strength and that he needed to discover these strengths in order to master the fears so that they would not disturb his sleep at night. I asked Ben to draw some of his strengths. Ben divided the paper into four squares and drew four cartoons.

His first strength was that he was a caring brother. He drew himself much bigger than his sister (he was actually small for his age). In the cartoon, Sara was telling him: “Ben don’t worry,” and his reply was that he had to. The second cartoon depicted Ben making friends with someone. He felt he was good at making conversations and making friends. Ben’s third strength was that he was a good friend. Finally, Ben said that he felt he was a “loving” boy, “I give my Mum hugs but I’m thinking how I’m going to draw that.” Ben drew himself saying, “I love you, Mum.”

Ben was then asked who was most worried about him. He responded that his mother was probably the most worried, with his father less so: “He loves me playing sport.” To the question, “Who are your biggest supporters, who barracks for you?” Ben answered that his family and friends gave him positive feedback, his mum and dad, followed by his friends, his sister and then his nan and pop. In looking back at the fears, Ben felt that they had “shrunk” in the week since

his first appointment. Ben was told that sometimes they might grow bigger just to challenge him as he attempted to conquer them.

### **Intervention**

All the above was part of the intervention and process of therapy. However, specifically in relation to the hypnotic intervention, Ben was told that it would help him to get over his fears by helping him to use the power of his imagination. Ben seemed to have a good imagination, and he was good at allowing his fears to get on top of him in the first place. We devised a game to help Ben tap into his imagination. Ben could play this game by himself if he woke up during the night, rather than having the radio on all night, waking up his mother and the rest of the family.

The sketch on a thumb was used to induce Ben into a hypnotic state (eye fixation technique) and he was then instructed to watch his favourite television program (*The Simpsons*). The deepening procedure of counting from 1 to 20 was implemented, followed by a further deepening technique using the image of Ben at his favourite place, which was the beach. This was followed by the therapeutic intervention:

1. Ben was reminded that his parents loved him and that he came from a loving family.
2. He was assured that he could feel increasingly safe and confident.
3. He was encouraged that he was able to deal with his problem and that he could master the fears rather than be their victim.
4. Ben was reminded that he was only 11 years old and that he did not have to deal with his parents' or his sister's problems, that he could love them and care for them but he did not need to feel responsible for their problems, emotions, and worries.
5. He was told that there were many changes ahead of him as he was growing up and that he would become independent and self-reliant, though the therapist did not know when this would happen.
6. Ben was reassured that when he was anxious at night, he could pretend he was watching *The Simpsons* and that would help to relax deeply and to go back to sleep.

Ben had a smile on his face during the whole hypnotic intervention. When he came out of the hypnotic state, after being counted out from 10 to 1, he said he felt calm and that he had enjoyed it.

For homework, Ben then asked that, since he loved writing stories, he might like to write a story about the problem that had started to dominate his life, and he could make himself the hero in the story. He could bring this to the next session and read it to the therapist.

### **Sole Session with Mrs Smith**

Two days after seeing Ben, a session was held with Mrs Smith alone, to talk about issues which could not be discussed in front of him. Mrs Smith stated that her husband would come to a session if “he had to” but that it was difficult for him to attend with all his work and leisure commitments. Although Mr Smith seems a friendly and affable man, he appeared uninterested in being involved in Ben’s therapy. Therefore, I decided to work mainly with Ben and his mother. Sara attended one session, which turned out to be the final session because by that stage the problem was resolved.

Mrs Smith stated that there was already an improvement in the situation as Ben thought he woke but wasn’t sure. Mrs Smith was getting more sleep and had started to relax: “I felt quite distressed that he was letting fears rule his life.” She stated that her husband was an optimistic person but Ben may have taken after his paternal grandfather who was very pessimistic. She described Ben’s personality: “It’s the way he is. He’s just afraid. He’s a negative person. Ben is afraid of being afraid.” Ironically, it was Sara who was born with all the problems in her physical health. “Of course, we had a daughter who was born with a hole in her heart and who has had three heart operations.” I commented on the grief and loss for Mrs Smith and her husband in having a child with a life-threatening condition, to which she responded: “I’m a pragmatist. I just accept things in life. You play with the cards you’re dealt.”

I gently addressed some of the marital issues which appeared to be linked to the problem. Mrs Smith was very well aware of the communication problems with her husband and the differences between them. They had marital therapy about six years before and Mrs Smith had decided to stay in the marriage despite the problems. She seemed resigned to the situation and found personal fulfilment through her children, in her work and new friends, and in her love of gardening. Mrs Smith was also a few years older than her husband and attributed her lack of interest in sex and concomitant lack of intimacy to this. I approached the issue of Mrs Smith leaning on her relationship with Ben as a substitute partner, an issue Mrs Smith had raised herself: “Am I too close to him? I don’t want to smother him.” It appeared that some of Ben’s difficulties were connected to his inability to separate from his mother. He was stuck at a critical stage of his development (pre-pubertal), therefore the crisis had ensued. A significant technique in family therapy practice is to normalise such presenting problems, namely that at certain stages of development families become stuck and need therapy to help them become unstuck and move on with their life (Goldenberg & Goldenberg, 1996). In this case, Mrs Smith needed help to let go of her son and allow him to individuate. Paradoxically I facilitated this by emphasising their connectedness. An indirect hypnotic technique was used with the family to unconsciously tap into these emotions and this was the telling of “The Youngest Turtle Story” through Ben (Scott, 1997). This story will be elaborated on in the following section.



### Session 3

Ben had asked his mother to make an urgent appointment with me as he was feeling distressed at school. I had liaised with Ben's schoolteacher, to get information about his progress, both socially and academically, and to inform the teacher that Ben was in therapy for a sleep disorder. The teacher was aware of the conflict between Ben and the other boy, knew that Ben enjoyed being known as the joker in the classroom, and that some of his behaviour was attention seeking.

At the start of the session, Ben was asked if he had done his homework. He had forgotten to bring his story but he had written one and told me that it was about what happened in the night: "If there's someone around everything's fine. In my story Dad was up watching cricket and that was alright." (This seemed further evidence that Ben needed his father to become more involved in his life.)

Ben felt he had conquered his fears, that the boogie man had disappeared from the ducted heating vent, and that he was no longer having nightmares. However, there were still some fears remaining. Apparently there was a drive-by shooting at a neighbour's house and that did not even wake Ben up.

I asked him again about the lemonade bottle filled with worries: how full would it be now? He answered that, if it was a bottle with 100 in it, the worries had gone down to 25. This was interpreted that Ben's fears had halved since therapy began. Some of his remaining worries were that he was scared his parents might break up, and that his grandad might "get old and die." Ben was scared of being alone and like sharing his experiences with everybody. He liked talking to his mother and father about what he talked about with me.

Ben was told that I had done some homework and that I would tell him the story of "The Youngest Turtle" while we played the game I taught him last time.

A face was sketched on Ben's thumb-nail to induce him into a hypnotic state. Ben then was guided to his "favourite place" to deepen the trance (this was a beach scene which was discussed before). A further deepening technique was used during which Ben was to imagine himself playing cricket and batting. The more runs he scored, the more relaxed he became, until he reached a century at which point he would be in a deep trance. This was followed by the story of "The Youngest Turtle" (Scott, 1997).<sup>1</sup>

The hypnotic state was terminated by counting backwards from 10 to 1. Once out of trance, Ben was asked to draw the experience and to talk about it. He first drew the older sister, then the mother turtle, the younger turtle had a shell and his body tucked up inside, and the father turtle was shown growling. Ben stated that the youngest turtle reminded him of himself, the way that he peeked out of his shell and worried about his mum.

## **Final Session**

Mrs Smith, Ben and Sara attended this session, I spent some time getting to know Sara as this was her first attendance at an appointment. She appeared to be a quiet and shy 12-year-old. Sara was aware that Ben worried about her. She stated she coped well with her diabetes and heart condition. Mrs Smith said that she was a special young girl and very brave person who accepted her lot in life. Sara had developed many pastimes which brought her a lot of pleasure such as needlework and knitting, which her grandmother had taught her. Sara's most difficult time was when she was attending a girl's grammar school where she was taunted by many of the girls for being different. She was now very happy at a public high school and getting good grades.

Mrs Smith remarked there had been a great improvement in Ben's sleep and he was now sleeping the night through except for the night after his previous session with me. He said he had heard footsteps. However, he was "okay" most of the time and no longer had the radio on all night. Mrs Smith stated: "He realises the fears are in his mind." Ben summed up: "Only 20% of the fears are left."

Mrs Smith and Sara were asked what they knew of "The Youngest Turtle" story and what they thought of the pictures Ben had drawn of the turtle family. Using an indirect hypnotic strategy, the story was retold to them and I described the next chapter which was new to all of them.

"The Youngest Turtle Story" was an appropriate metaphor for the difficulties all the members of this family were struggling with.

I reviewed what had happened, the changes that had been made, and the skill which Ben had developed in using the power of his mind to get back to sleep so that the fears did not keep him and his family, especially his mother, up all night. This was deemed to be the last session with a follow-up session to be made in November if required.

As a parting ritual to end the therapy, and to congratulate Ben in his success in mastering the problem, I gave him a pouch of Guatemalan trouble dolls.

## **FOLLOW-UP**

A month later, Mrs Smith spoke positively of her experience of the therapy and of Ben's improvement. The family had gone on a holiday and Ben slept well while away. Presumably Ben also spent a lot of time with his father on the holiday. He had gone to school camp two weeks before and had no sleeping problems there. He took his teddy bear with him, despite taunts from the other boys. Ben spoke to his trouble dolls most nights and the sleep disturbances, as well as the boogie man in the heating ducts, had vanished.

## REFERENCES

- Goldenberg, I., & Goldenberg, H. (1996). *Family therapy: An overview* (4th ed.). Los Angeles: Brooks/Cole.
- Oaklander, V. (1978). *Windows to our children*. Utah: Real People Press.
- Olness, K. & Gardner, G. G. (1988). *Hypnosis and hypnotherapy with children* (2nd ed.). Philadelphia: Grune & Stratton.
- Scott, E. (1995). Some thoughts for therapy with children. *Psychotherapy in Australia*, 2 (1), 27–31.
- Scott, E. (1997). The youngest turtle: A story for Monica. *Psychotherapy in Australia*, 3 (4), 20–22.

1        “This is a story for everyone to remind us of the pain of emotional separation, an experience about which many of us are afraid to speak ... Once there was a turtle, it was the youngest of a family of turtles. This turtle spent a lot of time with its neck inside its shell because it was a very careful turtle. At other times the youngest turtle peeked outside its shell, mostly to eat but sometimes to play or to fight with its older turtle sister. But sometimes the youngest turtle crept very close to its mother, so close that it was hard to tell where the mother ended and where the youngest turtle began. The thing the youngest turtle was very good at was not bothering the father turtle, because he seemed to be a very long way away from the rest of the family. One day the youngest turtle peeked outside its shell and noticed that the mother turtle was not where the youngest turtle thought she would be. This made the youngest turtle very frightened indeed and she went about as quickly as a turtle can go looking for her mother ...” (Scott, 1997, p. 20). The story continues to elaborate on how the youngest turtle separates from the mother and grows up to be its own person, as well as how the mother and father turtle and sister manage to start living their own life. The therapist thought that this was a most appropriate metaphor which touched on the underlying problems in Ben’s life about his own separation from his mother and growing up to be an 11-year-old boy who could sleep on his own at night.

## **DO FANTASY PRONENESS AND PERSONALITY AFFECT THE VIVIDNESS AND CERTAINTY OF PAST-LIFE EXPERIENCE REPORTS?**

**Sonje Robertson**

*Queensland University of Technology*

**Kathryn M. Gow**

*Queensland University of Technology*

---

This article reports on an aspect of a larger study which investigated the relationship between reports of past-life experiences and certain psychological variables. Extracted from a larger data pool of 271 subjects, on which preliminary analyses were conducted, a smaller cohort of 99 people, who had identified themselves as having had a past-life experience (experiencers), provided the data for specific analyses on whether fantasy proneness (as measured by the ICMI) and personality characteristics (as measured by the MBTI) affect the vividness and certainty of reported past-life experiences (Robertson, 1998).

This article investigates, particularly in relation to research by Spanos, Menary, Gabora, DuBreuil, and Dewhirst (1991), the assumption that a propensity toward fantasy is an important determinant of the vividness of a subject's past-life experience, and the certainty assigned to these experiences. Additionally, the relationship between certainty and vividness of past-life experiences will be explored.

### **The Phenomenon of Reincarnation**

The concept of reincarnation is widely accepted in the East and is central to several major religious systems (Berger & Berger, 1995; Harpur, 1991; Head & Cranston, 1977). Belief in some form of reincarnation, or a succession of

---

Requests for reprints should be sent to Kathryn M. Gow, PO Box 268, Red Hill, Queensland 4059. E-mail: k.gow@qut.edu.au

rebirths, is one of the oldest, most universal religious phenomena known to mankind. A popular feature of New Age thinking is the idea that we have already lived many lives and will continue to do so in the future. In the West, this concept is generally regarded with scepticism, although indications through Gallup polls show that belief in reincarnation is increasing (Gallup & Proctor, 1982; Wilson, 1982).

Regression techniques, and the notion of reincarnation, came to the attention of Theosophists in the Western world in 1956 with the publication of *The Search for Bridey Murphy* (Bernstein, 1956). This created an interest for books on reincarnation in which regression techniques are depicted as uncovering an apparent previous life or lives (e.g., Fiore, 1978, 1979; Wambach, 1978, 1979; Weiss, 1988; Woolger, 1988).

As there is currently no tangible evidence to support the idea of a person having had a past-life experience, researchers have increasingly explored explanations for understanding these occurrences.

### **Explanations for Reports about Past-Life Experiences**

One explanation for past-life experiences that several researchers have suggested is that “memories” of having lived a past life are fantasy constructions (Baker, 1982, 1992; Spanos, Burgess, & Burgess, 1994; Spanos et al., 1991; Wilson, 1982). According to Spanos and colleagues (1994), these fantasy constructions are important “because they shed light on the processes by which people come to treat their fantasies as real” (p. 434). Despite the inclusion of real memory elements, however, past-life “memories” are primarily fantasy constructions that are validated due to an individual’s belief system and social endorsement (Johnson, 1988).

Earlier, Kampman and Hirvenoja (1978) found that subjects incorporated stories picked up as children, knowledge from books, and events in their own lives as sources of information to construct their past-life identities. This is consistent with the hypothesis that past-life reports are fantasy constructions that individuals create on the basis of their limited and often inaccurate historical information (Kampman, 1976; Spanos et al., 1991; Wilson, 1982).

**Fantasy Proneness** Research suggests that the personality construct of fantasy proneness has been linked with the reporting of personal parapsychological experiences (Irwin, 1990; Lynn & Rhue, 1987, 1988; Wilson & Barber, 1983a) and to the reporting of “exotic” beliefs such as paranormal beliefs (Council & Huff, 1990; Irwin, 1990; Spanos et al., 1991) and past-life identities (Spanos et al., 1994; Spanos et al., 1991).

The construct of fantasy proneness has been characterised as an extensive and deep involvement in fantasy and imagination. Wilson and Barber (1983a) initially described this ability as one where an individual has the capacity to “set the theme and unfold an imaginative scenario which consists of characteristics typical of a dream and a motion picture” (p. 342). More specifically, Wilson and

Barber considered fantasy proneness as an individual's disposition to experience a world of one's own making, laden with imagery, imagination and fantasy.

Based on Hilgard's (1979) findings, Wilson and Barber (1983a) employed the Creative Imagination Scale (Barber & Wilson, 1979, Wilson & Barber, 1978) to establish responsiveness to guided imagining, and responsiveness to hypnotic suggestion. Wilson and Barber's (1981, 1983a) investigations into fantasy proneness, along with Hilgard's (1970, 1979) work, identified a small group of individuals who tended to fantasise for a large part of the time, called the "fantasy prone personality" or "fantasisers." Wilson and Barber (1981, 1983a) identified a number of shared characteristics which were commonly reported by the fantasisers. Some of the childhood characteristics of fantasisers included: living in a make-believe world, pretending that dolls and stuffed animals were real, believing in fairies and leprechauns, playing with imaginary companions and pretending to be other people. Some of the shared characteristics of fantasisers during adulthood include: spending much of their waking time fantasising, experiencing their fantasies as "real as real" (hallucinatory) in all sense modalities, vividly reliving past memories, being prone to imaginary illnesses, considering themselves as psychic or sensitives, reporting numerous telepathic and pre-cognitive experiences, seeing apparitions, having out-of-body experiences and having an interest in new experiences including hypnosis.

Recent findings have continued to support the construct of fantasy proneness (Lynn & Rhue, 1986, 1987, 1988) using Wilson and Barber's (1983b) Inventory of Childhood Memories and Imaginings (ICMI), a measure of fantasy proneness. Research, using the ICMI, has indicated that high fantasisers are more likely to report, and believe in, a variety of paranormal experiences than medium or low fantasisers (Council, Greyson, & Huff, 1988; Council & Huff, 1990; Myers & Austin, 1985; Wilson & Barber, 1983a).

**Personality** Another area of interest in the present study concerns paranormal beliefs and fantasy proneness within the domain of certain personality characteristics. The Myers Briggs Type Indicator (MBTI; Myers, 1962) has been accepted by researchers (e.g., Boyle, 1995; Murray, 1990) as identifying certain major dimensions of personality. Research by Murphy and Lester (1976) investigated the relationship between belief in ESP (extra-sensory perception), defined as telepathy, clairvoyance, and precognition and the thinking–feeling dimension of the MBTI. There was a weak, though significant, effect for belief in ESP with a preference for feeling rather than thinking on the MBTI.

Some research has investigated fantasy and imagery and MBTI types (cf., Ireland & Kernan-Schloss, 1983; O'Haire & Marcia, 1980) in Myers and McCaulley's (1985) MBTI manual. These studies discovered that subjects displaying more interest in fantasy and imagery were more likely to have preferences for intuition and feeling on the intuition–sensing and feeling–thinking dimensions of the MBTI.

Recently, a study (Gow, Lurie, Coppin, Popper, & Powell, 1998) using UFO experience groups (sightees, contactees and abductees), compared to nonexperience groups, examined the four MBTI personality dimensions and revealed that UFO experiencers, who scored higher on fantasy proneness, and scored significantly higher on the “feeling” rather than the “thinking” preference on the MBTI than the nonexperiencer group. Furthermore, significant differences were also found between groups on the sensing–intuiting dimension of the MBTI, pointing at a relationship between parapsychological experiences and preferences for feeling and intuition on the MBTI. Other research by Spanos et al. (1994) examined both UFO and past-life experiences in terms of the hypothesis that such “memories” were considered as primarily fantasy constructions.

### **Vividness and Certainty of Past-Life Experience**

Two aspects of past-life experiences, the vividness and certainty that an individual assigns to such occurrences, based on Spanos and colleagues’ (1991) research, will be reported on.

**Vividness** Fantasy proneness has been associated with subjective intensity or vividness of a past-life experience (e.g., Spanos et al., 1994, 1991). Spanos and colleagues claim that among subjects who reported a past-life identity, propensity toward fantasy was an important determinant of the vividness of their past-life experience. However, they cautioned that vivid imaginings are not necessarily defined as real events. Wilson and Barber (1983a) alleged that fantasy-prone subjects tend to have more vivid sensory experiences than do comparison subjects and hypothesised that these experiences are causally interrelated as follows:

Individuals who focus on and vividly feel their sensory experiences, have relatively vivid memories of their experiences; and individuals with vivid memories of their experiences are able to have relatively vivid fantasies because they can use their vivid memories as raw material from which they can creatively construct their fantasies. (p. 380)

As stated previously, preferences for intuition and feeling on the intuition–sensing and feeling–thinking dimensions of the MBTI have been associated with fantasy and imagery (Ireland & Kernan-Schloss, 1983; O’Haire & Marcia, 1980). Furthermore, research by Ireland and Kernan-Schloss found that feeling and intuitive types report memories that are significantly more vivid than thinking and sensing types. Therefore, these three variables (fantasy proneness, intuition and feeling preferences on the MBTI) will be investigated in terms of how well they can predict the vividness of a past-life experience.

**Certainty** Subjects’ prior beliefs concerning reincarnation have been associated with the certainty that an individual thinks the experience is an actual past-life experience (Spanos et al., 1994, 1991). Although propensity towards

fantasy does not seem to account for the certainty that subjects assign to their past-life experiences, the subjective vividness of past-life experiences does seem to account for the degree of certainty assigned to these experiences (Spanos et al., 1991). Spanos and colleagues (1991) contend that, independently of initial attitudes and beliefs about reincarnation, relatively intense or vivid past-life fantasies are more likely to be interpreted as real occurrences than are less intense past-life fantasies. Along related lines, Johnson, Foley, Suengas, and Raye (1988) found that “imagined events that were vivid and rich in perceptual and contextual details were more likely than impoverished imaginings to be confused with actual, autobiographical memories” (p. 316, in Spanos et al., 1991). The relationships between vividness and certainty will be investigated in this study.

**Hypotheses** It is hypothesised that: (a) A combination of high fantasy proneness, and high scores on the feeling and intuition preferences on the MBTI will predict with optimal accuracy a more vivid past-life experience than just fantasy proneness alone; and (b) Experiencers who report a more vivid past-life experience will assign more certainty to their past-life experience than those who report a less vivid past-life experience.

## **METHOD**

### **Participants**

A total of 99 subjects categorised as experiencers (those who claim to have had a past-life experience) participated in this study. Participants included 16 subjects who were accessed through the first-year psychology subject pool at the Queensland University of Technology (these subjects received experimental credit for their participation); 5 second-year students in hypnosis research at the University of Queensland; 7 participants including teachers and administration staff accessed from a business and language college in Brisbane; and 13 people from the general population. In addition, 58 participants were accessed through various groups around Brisbane including the Spiritualist Church, meditation and astrology groups, a New Age fair and the Theosophical Society.

Of the total sample, 72 were female and 27 were male participants, aged from 18 years to 50 years and over (age distribution: 18–20 = 8%, 21–35 = 26%, 36–50 = 43%, over 50 = 23%). Other demographic data includes education levels (high school = 31%, TAFE college = 14%, university = 39%, post-graduate degree = 16%), religious affiliations (no organised religion = 43%, Christian = 9%, Spiritualist/New Age = 40%, other = 8%), and occupations (unemployed = 4%, manual workers = 4%, service workers = 22%, professionals = 29%, housewives = 6%, students = 18%, pensioners = 6%, administration = 7%, self-employed = 4%).



## **Materials**

The Inventory of Childhood Memories and Imaginings (ICMI) was used to measure fantasy proneness; and the Myers Briggs Type Indicator (Form G) was used to measure personality dimensions. Questions relating to background information and some additional questions relating to the identification of having had an actual past-life experience were included in the survey package.

**Inventory of Childhood Memories and Imaginings (ICMI)** The ICMI (Wilson & Barber, 1983b) is a 52-item true–false questionnaire designed to assess characteristics associated with fantasy proneness. A total ICMI score is calculated and participants are deemed to be high fantasizers with scores of 37 or better, medium fantasizers with scores of between 11 and 36, or low fantasizers with scores of 10 or lower (Lynn & Rhue, 1986). Previous research has established the measure as reliable with a coefficient of .89 (Lynn & Rhue, 1986), and with test–retest reliabilities ranging from .87 to .93 (Silva & Kirsch, 1992). Significant correlations with other scales measuring imaginative ability and propensity attest to the scales' validity (see Silva & Kirsch, 1992).

**Myers Briggs Type Indicator (MBTI)** The MBTI uses four dichotomous dimensions that classify individuals as either introverted (I) or extroverted (E), intuitive (N) or sensing (S), thinking (T) or feeling (F), and perceiving (P) or judging (J). Subjects rate 32 dichotomous items proportionally out of an allocation of 10. A total score for each dimension is derived with scores for opposing preferences summing to 80. The MBTI has been found to be adequately reliable and valid (Boyle, 1995; Murray, 1990).

**Background details and past-life experiences** The background details included information regarding gender, age, education, occupation, current religious/philosophical beliefs, country of origin and cultural background. The next five questions were used to allocate subjects to past-life experienter, believer or nonbeliever groups. Two questions dealt with belief in reincarnation and past-life experiences; one question separated participants who had experienced a past-life experience from those who had not. Two follow-on questions, derived from Spanos et al. (1991) study, determined: (a) the subjective intensity (vividness) of the past-life experience on a 4-point scale (0 – 3) where 0 means “not at all vivid” and 3 means “extremely vivid”; and (b) the certainty that they assigned to their past-life experience on a 3-point scale where 3 means the subject is sure that the past-life experience was real, 2 means there were elements of reality and elements of fantasy and 1 means the subject is sure that the past-life experience was a fantasy.

## PROCEDURE

The appropriate ethical standards were upheld and written consent was obtained before participants completed the survey package. The experiencers were identified from their responses to the questionnaire item which asked them if they had had a past-life experience. They were also asked to give details of that experience to ensure that it constituted a past-life experience.

## RESULTS

The data was inspected for significant correlations on the feeling–thinking and the intuition–sensing dimensions of the MBTI and the ICMI for the experiencers group. The data revealed that scores on the ICMI and both the feeling and intuition preferences were significantly correlated at the .001 level (.18 and .45 respectively).

The first analysis assessed hypothesis 1: that, for past-life experiencers, fantasy proneness, and the intuition and feeling preferences on the MBTI combined would predict with optimal accuracy a more vivid past-life experience than just fantasy proneness alone. The second analysis assessed hypothesis 2: that experiencers who had a more “vivid” past-life experience assigned more certainty to their past-life experience than those who had a “less vivid” past-life experience.

**Hierarchical multiple regression** A hierarchical multiple regression was performed to determine if the hypothesised addition of the intuition and then the feeling preferences on the MBTI improved vividness of past-life experience beyond that afforded by differences in fantasy proneness, as dictated from the research (e.g., Gow et al., 1998; Spanos et al., 1991). In the context of regression analysis, linearity, normality, homoscedasticity, multicollinearity, and singularity were satisfied and no outliers, missing data or suppressor variables were found. The intuition preference on the MBTI was added to the equation before the feeling preference of the MBTI as it was correlated more highly with the ICMI.

Table 1 displays the unstandardised regression coefficients (B) and intercept, the standardised regression coefficients, (b), multiple R,  $R^2$  and change in  $R^2$  ( $\Delta R^2$ ) after entry of all three variables. Multiple R was significantly different from zero at the end of each step. After Step 3, with all IVs in the equation, Multiple R was  $R = .78$ ,  $F(2, 96) = 49.08$ ,  $p < .001$ . After Step 1, fantasy proneness accounted for 56.6% of the variance,  $R^2 = .57$ ,  $F(2, 96) = 126.42$ ,  $p < .01$ . At Step 2, the intuition preference on the MBTI was added to the equation. The intuition preference added significantly to the variance accounted for  $\Delta R^2 = .03$ ,  $F(2, 96) = 6.06$ ,  $p < .05$  thereby increasing the overall variance by  $R^2 = .60$ ,  $F(2, 96) = 69.54$ ,  $p < .01$ . At Step 3, the feeling preference on the MBTI was then added and this variable did not add significantly to the variance accounted for  $\Delta R^2 = .02$ ,  $F(2, 96) = 3.93$ ,  $p = .05$ . The total variance accounted

for by all the variables is  $R^2 = .61$ ,  $F(2, 96) = 49.08$ ,  $p < .01$ . Addition of the intuition preference on the MBTI had a weak but significant improvement of the total variance,  $R^2$  accounted for, than just fantasy proneness, whereas the feeling preference on the MBTI had no significant effect.

**Table 1:** Summary of Hierarchical Regression Analysis for Variables Predicting Vividness of Past Life Experience on the “Experiencer” Group ( $N = 99$ )

Variables	B	b	Multiple R	Total $R^2$	$DR^2$
Step 1					
Fantasy proneness (ICMI)	.08	.75***	.75***	.57	
Step 2					
Fantasy proneness	.07	.67***			
Intuition (MBTI)	.01	.18*	.77***	.59	.03*
Step 3					
Fantasy proneness	.07	.68***			
Intuition	.01	.11			
Feeling (MBTI)	.01	.14	.78***	.61	.02
Intercept = -1.02**					

Note: Unstandardised regression coefficients (B), intercept and standardised regressions coefficients (b) are for the model after all independent variables in each step have been entered.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

**Kruskal-Wallis one-way ANOVA and Mann-Whitney U test** The final analysis tested the hypothesised differences between degrees of vividness of reported past-life experience and certainty that subjects assign to their past-life experiences using the nonparametric equivalent of ANOVA, a Kruskal-Wallis one-way ANOVA. As anticipated, there was a significant relationship between vividness and certainty ( $r = .43$ ,  $p < .001$ ). There was a violation of the homogeneity of variance assumption for ANOVAs, due to unequal group sizes; therefore, a Kruskal-Wallis one-way ANOVA, was conducted with results of  $\chi^2(2) = 18.16$ ,  $p < .001$ ). A series of Mann-Whitney U tests revealed significant differences between subjects who had “extremely vivid” and “a little vivid” past-life experiences and their certainty of that experience ( $U = 98.5$ ,  $p < .001$ ), and between subjects who had “extremely vivid” and “quite vivid” past-life experiences and their certainty of that experience ( $U = 666.0$ ,  $p < .01$ ). However, there were no significant differences between subjects who had “quite vivid” and “a little vivid” past-life experiences and their certainty of that experience ( $U = 95.0$ ,  $p > .05$ ).

## DISCUSSION

### Findings in Relation to Hypotheses

Hypothesis 1 was confirmed, such that fantasy proneness, in combination with the intuition preference on the MBTI, predicted with optimal accuracy a more vivid past-life experience than just fantasy proneness alone. However, the feeling preference on the MBTI did not add any predictive value, such that when added to fantasy proneness and intuition its effect was not significant. Although intuition did add some predictive value to the equation, the moderate correlation between fantasy proneness and intuition could account for the small addition of predictive value.

The second hypothesis, that degree of vividness would account for differences in certainty that subjects assign to their past-life experiences, was confirmed. Experiencers who had “extremely vivid” past-life experiences were more certain than those who had “quite vivid,” or “a little vivid” past-life experiences.

### Examining the Evidence for Past-Life Experiences

The findings of this study are now explained in more detail. First, each of the variables (fantasy proneness and the feeling and intuition preferences on the MBTI) will be reviewed, followed by assessment of vividness and certainty of past-life experience results.

**Fantasy proneness** The results of this study demonstrate that the reporting of past lives was correlated significantly with fantasy proneness. One interpretation suggests that fantasy proneness may promote cognitive abilities which enable individuals to construct past-life identities which supports Spanos and colleagues’ (1991) views. Consistent with several researchers (e.g., Kampman, 1976; Spanos et al., 1991; Wilson, 1982), reporting of past-life existences would be considered fantasy constructions based on historical periods and localities with which the subject was already familiar. Some researchers (e.g., Alcock, 1981) even go as far as to say that parapsychological occurrences, such as past-life experiences, may just be a “product of an overactive imagination” (Irwin, 1990, p. 656).

However, it is difficult to verify empirically whether a past-life existence actually happened or not, especially as most past-life experiences are said to be of ordinary lives.

It seems that fantasy proneness is only one of a number of factors that influences whether an individual will experience paranormal phenomena such as a past-life existence (see Gow & Robertson, 1999). However, a propensity for fantasy proneness does seem to be one of the factors that increases the likelihood of someone reporting they have had a past-life experience.

**Personality** This study investigated the relationship between a certain personality typology, as measured by the MBTI, and the reporting of a claimed past life. The results of this study indicated that the feeling and intuition preferences on the MBTI significantly correlated with scores on the ICMI.

Myers and McCaulley (1985) claim that feeling types tend to assess impact on people, be guided by personal values, strive for individual validation, and be more accepting than their thinking counterparts. In addition, they contend that intuitive types value imaginative insight, are future-oriented, and trust their inspiration more than sensing types. It seems credible, therefore, that past-life experiencers would be more likely to score highly on both the feeling and intuition preferences on the MBTI, which the data in this study demonstrated.

### **Past-Life Experiencers**

**Vividness of past-life experience** Hypothesis 1 was confirmed for fantasy proneness and intuition, but not for the feeling preference on the MBTI. In this analysis, fantasy proneness and being an intuitor were good indicators of the vividness of a reported past-life experience. However, fantasy proneness was the more reliable indicator. This is consistent with Spanos et al.'s (1991) study where all four of their fantasy measures correlated significantly with the subjective intensity or vividness of reported past-life re-enactments. A possible explanation may be found in Wilson and Barber's (1983a) assertion that high fantasy-prone individuals tend to employ the use of imagery whenever possible, and thus individuals who claimed to have a past-life existence have imagined their experience like a dream or a motion picture. However, as Wilson and Barber (1983a) suggested, having a propensity to fantasy proneness and vividly remembering sensory experiences are causally related. This seems credible, as the ability to imagine a scenario would make it easier to construct a complete vivid past-life existence.

Being an intuitor was also a reasonable predictor of vividness of experience. There was a combined additive effect of fantasy proneness and intuition whereby both variables predicted that, the more imaginative, intuitive, and fantasy tendencies an individual possesses, the more likely they are to report vivid past-life experiences. Being an intuitor has been described in the literature as being associated with fantasy and imagery (Ireland & Kernan-Schloss, 1983; O'Haire & Marcia, 1980). In Myers and McCaulley's (1985) MBTI manual, they state that sensing types seek the fullest possible experience of what is immediate and real, whereas intuiting types seek the furthest reaches of the possible and imaginative. It makes sense, then, that intuitive types would be more likely to claim they have had a past-life experience than sensing types, as the results in this study indicate. Alternatively, the feeling preference did not predict how vivid an individual's past-life experience would be. Therefore, this did not support Ireland and Kernan-Schloss's (1983) study, which claimed that

feeling types report more vivid descriptions in their experiences and memories than thinking types.

**Certainty of past-life experience** The second hypothesis was supported such that participants who reported relatively vivid or intense past-life occurrences were more likely to be certain they were real happenings than those who reported less intense past-life experiences. This is consistent with Spanos and his colleagues' (1991) research which found that, independently of initial attitudes and beliefs about reincarnation, intensity of past-life experiences serves as one cue for retrospectively interpreting such experiences as real rather than imaginary. Similarly, as mentioned previously, Johnson et al. (1988) found that the more vivid the perceptual and contextual details, the more likely that the fantasies are confused with actual autobiographical memories. It seems plausible that individuals who experience an intense or vivid past-life occurrence would attribute more certainty to their experience, as it would appear to be more real to them.

**Future research** A limitation in the sample is the bias in this sample towards individuals with a propensity for fantasy proneness. Volunteer psychology and hypnosis students as well as meditation, astrology, and spiritual group members, who may be more likely to have a fantasy prone personality than the general population, were used in this study.

This study is not claiming that it captures the full picture of the past-life experiencer or that the variables (high fantasisers and being a certain personality type) are the only variables that may contribute to an individual reporting a past-life existence (a fuller account of such other variables is outlined in the 1999 ASH conference paper by Gow & Robertson, 1999).

In combination with other studies in this area, the current results have contributed further to the goal of understanding individuals who report past-life experiences. This study has provided some idea of what variables (fantasy proneness and personality typology) might be relevant to reporters of past lives.

## CONCLUSION

This study investigated to what extent fantasy proneness and the feeling and intuition preferences on the MBTI affected the vividness of an apparent past-life experience. It also revealed that people who report more vividness in their past-life occurrence are more likely to be certain that their experience actually happened rather than it being a fantasy.

## REFERENCES

- Alcock, J. E. (1981). *Parapsychology: Science or magic? A psychological perspective*. Oxford: Pergamon.
- Baker, R. A. (1982). The effect of suggestion on past-lives regression. *American Journal of Clinical Hypnosis*, 25, 71–76.
- Baker, R. A. (1992). *Hidden memories*. Buffalo, NY: Prometheus.
- Barber, T. X., & Wilson, S. C. (1979). The Barber Suggestibility Scale and the Creative Imagination Scale: Experimental and clinical applications. *American Journal of Clinical Hypnosis*, 21, 84–108.
- Berger, A., & Berger, J. (1995). *Fear of the unknown: Enlightened aid-in-dying*. Westport, CT: Praeger.
- Bernstein, M. (1956). *The search for Bridey Murphy*. New York: Lancer.
- Boyle, G. J. (1995). Myers-Briggs Type Indicator (MBTI): Some psychometric Limitations. *Australian Psychologist*, 30, 71–74.
- Council, J. R., Greyson, B., & Huff, K. D. (1988, November). *Reports of paranormal experiences as a function of imaginative and hypnotic ability*. Paper presented at the meeting of the Society for Clinical and Experimental Hypnosis, Asheville, NC.
- Council, J. R., & Huff, K. D. (1990). Hypnosis, fantasy activity and reports of paranormal experiences in high, medium and low fantasisers. *British Journal of Experimental and Clinical Hypnosis*, 7, 9–15.
- Fiore, E. (1978). *You have been here before: A psychologist looks at past lives*. New York: Ballantine Books.
- Fiore, E. (1979). Hypnotic regression into past lives: A case of resistance to hypnosis. In G. Burrows, D. R. Collinson & L. Dennerstein (Eds.), *Hypnosis* (pp. 216–268). Amsterdam: Elsevier.
- Gallup, G., & Proctor, W. (1982). *Adventures in immortality: A look beyond the threshold of death*. New York: McGraw-Hill.
- Gow, K., Lurie, J., Coppin, A., Popper, A., & Powell, A. (1998, September). *Fantasy proneness and other psychological correlates of UFO experience*. Paper presented at the 28th Australian Society of Hypnosis Congress, Alice Springs.
- Gow, K., & Robertson, S. (1999, September). *Past-life experiencers: Fantasy, beliefs, and personality*. Paper presented at the 29th Australian Society of Hypnosis Congress, Sydney.
- Harpur, T. (1991). *Life after death*. Toronto: McClelland & Stewart.
- Head, J., & Cranston, S. L. (Eds.). (1977). *Reincarnation: The phoenix fire mystery*. New York: Crown.
- Hilgard, E. R. (1970). *Personality and hypnosis: A study of imaginative involvement*. Chicago: University of Chicago Press.
- Hilgard, E. R. (1979). Divided consciousness in hypnosis: The implications of the hidden observer. In E. R. Fromm & R. E. Shor (Eds.), *Hypnosis: Developments in research and new perspectives* (pp. 45–79). Chicago: Aldine.
- Ireland, M. S., & Kernan-Schloss, L. (1983). Pattern analysis of recorded daydreams, memories, and personality type. *Perceptual and Motor Skills*, 56 (1), 119–125.

- Irwin, H. J. (1990). Fantasy proneness and paranormal beliefs. *Psychological Reports, 66*, 655–658.
- Johnson, M. K. (1988). Reality monitoring: An experimental phenomenological approach. *Journal of Experimental Psychology: General, 117*, 490–494.
- Johnson, M. K., Foley, M. A., Suengas, A. G., & Raye, C. L. (1988). Phenomenal characteristics of memories for perceived and imagined autobiographical events. *Journal of Experimental Psychology: General, 117*, 371–376.
- Kampman, R. (1976). Hypnotically induced multiple personality: An experimental study. *International Journal of Clinical and Experimental Hypnosis, 24*, 215–227.
- Kampman, R., & Hirvenoja, R. (1978). Dynamic relations of the secondary personality induced by hypnosis to the present personality. In F. H. Frenkel & H. S. Zamansky (Eds.). *Hypnosis at its bicentennial* (pp. 183–188). New York: Plenum Press.
- Lynn, S. J., & Rhue, J. W. (1986). The fantasy-prone person: Hypnosis, imagination and creativity. *Journal of Personality and Social Psychology, 51*, 404–408.
- Lynn, S. J., & Rhue, J. W. (1987). Hypnosis, imagination and fantasy. *Journal of Mental Imagery, 11*, 101–112.
- Lynn, S. J., & Rhue, J. W. (1988). Fantasy proneness: Hypnosis, developmental antecedents, and psychopathology. *American Psychologist, 43*, 35–44.
- Murphy, K., & Lester, D. (1976). A search for correlates of belief in ESP. *Psychological Reports, 38*, 82.
- Murray, J. B. (1990). Review of research on the Myers-Briggs Type Indicator. *Perceptual and Motor Skills, 70*, 1187–1202.
- Myers, I. (1962). *The Myers-Briggs Type Indicator*. Princeton: Educational Testing Service.
- Myers, S. A. & Austin, H. R. (1985). Distal eidetic technology: Further characteristics of the fantasy-prone personality. *Journal of Mental Imagery, 9*, 57–66.
- Myers, I., & McCaulley, M. H. (1985). *Manual: A Guide to the Development and use of the Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologists Press.
- O'Haire, T. D., & Marcia, J. E. (1980). Some personality characteristics associated with Ananda Marga meditations: A pilot study. *Perceptual and Motor Skills, 51*, 447–452.
- Robertson, S. (1998). *Past-life experience: Fantasy, beliefs, and personality*. Unpublished thesis, Queensland University of Technology.
- Silva, C. E., & Kirsch, I. (1992). Interpretive sets, expectancy, fantasy proneness, and dissociation as predictors of hypnotic response. *Journal of Personality and Social Psychology, 63*, 847–856.
- Spanos, N. P., Burgess, C. A., & Burgess, M. F. (1994). Past-life identities, UFO abductions, and satanic ritual abuse: The social construction of memories. *International Journal of Clinical and Experimental Hypnosis, 42*, 433–446.
- Spanos, N. P., Menary, E., Gabora, N. J., DuBreuil, S. C., & Dewhirst, B. (1991). Secondary identity enactments during hypnotic past-life regression: A sociocognitive perspective. *Journal of Personality and Social Psychology, 61*, 308–320.



- Wambach, H. (1978). *Reliving past lives*. New York: Harper & Row.
- Wambach, H. (1979). *Life before life*. New York: Bantam.
- Weiss, B. 1988. *Many lives, many masters*. New York: Simon & Schuster.
- Wilson, I. (1982). *Reincarnation? The claims investigated*. Harmondsworth: Penguin.
- Wilson, S. C., & Barber, T. X. (1978). The Creative Imagination Scale as a measure of hypnotic responsiveness: Applications to experimental and clinical hypnosis. *American Journal of Clinical Hypnosis*, 20, 235–249.
- Wilson, S. C., & Barber, T. X. (1981). Vivid fantasy and hallucinatory abilities in the life histories of excellent hypnotic subjects (“sommambules”): Preliminary report with female subjects. In E. Klinger (Ed.), *Imagery: Concepts, results and applications*. Vol. 2 (pp. 133–149). New York: Plenum.
- Wilson, S. C., & Barber, T. X. (1983a). The fantasy prone personality: Implications for understanding imagery, hypnosis, and parapsychological phenomena. In A. A. Sheikh (Ed.), *Imagery: Current theory, research, and application* (pp. 340–387). New York: Wiley.
- Wilson, S. C., & Barber, T. X. (1983b). *The inventory of childhood memories and imaginings (ICMI)*. Framington, MA: Cushing Hospital.
- Woolger, R. J. 1988. *Other lives, other selves*. New York: Bantam.

## **TREATMENT OF PTSD UTILISING CBT AND HYPNOTHERAPY**

**Alison Lumsden**

*Psychologist*

---

The article reports the use of hypnosis in the treatment of post-traumatic stress disorder. The case illustrates the efficacy of hypnosis when used as an adjunct to cognitive-behaviour therapy.

Marie, a 48-year-old woman, presented for counselling four weeks after experiencing a life-threatening home invasion. She self-referred after being encouraged to seek professional help by a colleague. Marie is an unmarried community worker who lives with two of her children.

The traumatic event occurred in December 1997. Marie returned home one evening to find the front door of her house open. She assumed that one of her children was responsible and proceeded inside into her son's room where she was confronted by an intruder. The ordeal which followed lasted for several hours. Marie was held at knife point and the intruder told her several times that he would kill her. She managed to contain the situation by talking calmly to the intruder. Eventually he fled and she called the police. Marie was not physically harmed. Her daughter had been asleep in the house throughout the whole incident and Marie said her greatest fear throughout the ordeal was that her daughter would walk in on the situation and be at risk too.

Marie experienced an acute anxiety reaction from the outset, with symptoms including emotional numbing, avoidance of cues that reminded her of the incident, sleep disturbance, intrusive distressing thoughts, nightmares, hypervigilance, and irritability. These symptoms had been occurring for more than four weeks at the time of the initial consultation, warranting a preliminary diagnosis of post-traumatic stress disorder (PTSD). This diagnosis was confirmed after more thorough assessment in subsequent sessions.

## TREATMENT CONSIDERATIONS

PTSD can be seen as a set of symptoms experienced by a person after they have been exposed to a traumatic event, which include re-experiencing symptoms, avoidance symptoms, and increased arousal. These clusters of symptoms can be experienced sequentially or simultaneously. Keane (1995) advocated the use of cognitive-behavioural therapy (CBT) for treatment of PTSD, particularly the use of what he terms the “six-phase oriented treatment.” These comprise:

1. Emotional and behavioural stabilisation phase;
2. Trauma education phase;
3. Stress management phase;
4. Trauma focus phase;
5. Relapse prevention; and
6. Follow-up and maintenance.

Keane states that exposure therapy can be used effectively in the trauma focus phase of treatment to help the client master the necessary skills to feel more prepared for intensive, direct intervention regarding their traumatic event. The rationale for using exposure treatments with traumatised clients is consistent with the view that PTSD occurs because of the individual’s inability to adequately process a distressing experience. Exposure therapy for PTSD can be seen as facilitating emotional processing to reduce PTSD symptoms (Rothbaum & Foa, 1996).

Hypnosis is also seen as a worthwhile treatment modality for PTSD. In terms of Keane’s phase-oriented treatment programme, hypnosis could be effectively utilised in stress management, trauma focus, relapse prevention, and maintenance phases.

Evans (1994) stated that hypnotic interventions can be used in a number of ways in the treatment of PTSD: as a supportive technique when the patient requires help in controlling anxiety, and as a means of uncovering repressed or dissociated thought and memories of the traumatic event. In addition, he argued that the phenomena associated with PTSD are consistent with the primary phenomena of hypnosis: absorption and dissociation. Spiegel, Hunt, and Dondershine (1988) stated that parallels between the hypnotic state and PTSD symptomatology have been confirmed, in that ratings of hypnotisability in those who experience PTSD are higher than those of patients with other psychiatric illnesses or than those of the normal population.

Additional evidence of the usefulness of hypnotic interventions in this case comes from Evans (1994), who argued hypnosis provides an appropriate and powerful treatment modality for PTSD and Brown and Fromm (1987), who said that hypnosis enhances effectiveness of behaviourally oriented therapies and reduces the duration of treatment.

## **PSYCHOSOCIAL HISTORY**

Marie is the mother of four children aged between 18 and 27 years, who lives in a public housing residence with her two youngest children. She separated from her husband 10 years previously.

Marie described her own childhood as difficult. She grew up in rural N.S.W. and moved to south-western Sydney after she was married. She had a close relationship with her mother and two aunts but was estranged from her father from an early age — both parents are now deceased. Marie described her ex-husband as violent and alcohol dependent, this being the reason she left the relationship. Marie completed formal education as a mature age student: she said that completing her education and getting into the workforce were the things that had helped her the most since the breakdown of her marriage. She maintains a close relationship with all of her children.

## **MEDICAL HISTORY**

Marie had not experienced any psychiatric conditions and had no previous history of counselling or psychotherapy. She mentioned a period of great stress in relation to her ex-husband's substance abuse and violence but did not consider that she had experienced anxiety or depression. She smokes approximately 15 cigarettes a day and admitted to moderate use of alcohol. Current medical conditions included psoriasis and hypertension; these were being monitored by her GP.

## **DIAGNOSIS**

The symptoms that Marie exhibited warranted a diagnosis of post-traumatic stress disorder (acute) consistent with DSM-IV criteria.

## **PREVIOUS HYPNOTIC EXPERIENCE**

Marie had not previously experienced hypnosis and had no knowledge of hypnotic phenomena. She stated that, in 1994, she had learned and successfully utilised simple relaxation techniques to combat exam nerves.

## **ASSESSMENT OF HYPNOTISABILITY**

The Stanford Hypnotic Clinical Scale was administered, on which Marie scored 4 out of 5, convincingly demonstrating moving hands together, experiencing a dream, age regression, and amnesia. She did not achieve the post-hypnotic suggestion. Other issues taken into account for assessing hypnotisability were her positive attitude toward the use of hypnosis and absence of contraindications such as depression, psychosis, or personality disorder.

## **GOALS OF TREATMENT**

We negotiated a treatment goal of reducing avoidance behaviours. Since the incident, Marie had been unable to walk into her son's room and was also unable to enter the house alone. She would often sit in the front garden until one of her children arrived home to check the house before she entered it. Marie was also avoiding certain locations in her community as she feared that these were places where the assailant might be.

Additional goals of treatment included reduction in intrusive distressing imagery, such as nightmares and flashbacks and a lowering of general arousal levels including insomnia, panic, anger, and overbreathing.

### **Session 1**

On first presentation, Marie seemed relatively unsure of her reasons for attending counselling, appearing uncomfortable and slightly anxious. The first session consisted of establishing rapport and building trust. Her history was taken and Marie talked about the home-invasion incident. Treatment options (including hypnosis) were discussed and an attempt was made to "normalise" some of her reactions to the trauma. The session was ended by teaching her a simple breathing technique and a grounding/distraction technique.

### **Sessions 2, 3, and 4**

Treatment initially consisted of a cognitive-behavioural approach. The first stage entailed the use of psycho-education about anxiety, PTSD, and the fight/flight reaction. Marie developed a clear understanding about what was happening to her when she experienced anxiety and other symptoms. She was able to understand that all the things that were happening to her were a reasonable reaction to the traumatic event she had experienced rather than an indication of "madness" or "insanity." She was able to understand that her mind had "overlearned" the experience and that some of her current symptoms were actually protective, albeit uncomfortable. Marie also came to understand that further processing of the traumatic memories was required before the symptoms would remit. This phase of psycho-education allowed Marie to automatically reframe some of her beliefs about what was happening to her and what the future held.

Marie was also taught arousal reduction and relaxation techniques. Initially, the aim was to utilise these techniques to help her stabilise her sleep patterns. (Marie was waking up two or three times a night in a panic state after dreaming of the home invasion.) It was noted that Marie responded very well to slow breathing followed by guided imagery (a beach scene was used). She subsequently reported feeling really light and tingly. She described the sensation as pleasant and calming. This type of imagery was then used to establish a "safe place" which would be utilised at a later stage in exposure therapy. The "safe

place” imagery was also effective for controlling panic attacks and distress experienced on waking from nightmares. Marie was asked to practise the slow breathing followed by the beach scene at least once a day or whenever she felt the need.

Throughout these sessions Marie needed to ventilate feelings about how the situation was affecting her family and her work. She had doubts about living in the house where the incident happened, was considering moving and was apprehensive about the impending court case (when the assailant presented in court, the case was held over and he was released on bail). Marie said she was angry that her life had been so greatly affected and she felt as if she was losing control. She was perplexed that she had dealt with so much adversity in her life yet had always coped, often providing support for others in crisis. She was very uncomfortable with her feelings of powerlessness related to the traumatic incident. Marie described herself as “weak,” “frightened” and “out of control.” These issues were dealt with in a supportive manner, attempting to reframe or challenge thoughts where appropriate.

## **Session 5**

By this session Marie’s condition had slightly stabilised, she was functioning at work and sleeping reasonably well. However, she continued to re-experience the home invasion in the form of frequent recurrent nightmares, and distressing intrusive thoughts. There had been no change to her pattern of avoidance and she was now reporting strong feelings of detachment and a numbing of responsiveness. Hypnosis was incorporated in treatment at this stage.

Hypnosis was induced using eye fixation and an instructed eye-closure technique. Marie was asked to hold her right hand at a comfortable distance from her face and focus on a spot on her palm. As she focused on the spot, suggestions of slowed breathing and increasing relaxation were put to her. After several minutes, she was instructed to allow her eyes to close and, at the same time, her hand would comfortably fall in her lap. It was noticed that shortly after Marie’s hand dropped, her eyelids were moving rapidly. Deepening of the trance state was achieved by more suggestions of slowed breathing and the establishment of a “yes set.” Marie’s attention was directed to the sensation of warmth at the point where her hand touched her stomach, the slight movement of her stomach in and out as she breathed, and the sensation of her body being supported by the chair. Deepening was further achieved by asking Marie to imagine a still pool of water, then to imagine drops of water rhythmically dropping onto the pool, sending out ripples. This image was coupled with Marie’s pattern of breathing and the suggestion was made that the ripples were moving through her body creating a sense of greater relaxation and tranquillity. An ideomotor signal was used to elicit her unconscious mind’s willingness to resolve the presenting symptoms of anxiety, to which she gave a positive response.

Counting from 1 to 20 was used and Marie was asked to imagine herself travelling comfortably along a path that led to a beach scene (this had been negotiated prior to hypnosis). Marie was directed to visualise all aspects of the scene and to incorporate experience of the other senses, for example smell of sea air, feelings of cool breeze blowing on her face, the sound of waves and birds, and the refreshing coldness of the sea water on her lower legs. Throughout the embellishment of this scene, metaphors and indirect suggestion were incorporated, relating to greater feelings of strength, safety and calmness. The image of a seabird circling high above the beach was incorporated with associated suggestions of freedom and control.

Direct suggestions were made to Marie in trance, in which she was given the choice of remaining in the beach environment, or to let it fade while she was carried deeper into hypnosis by my voice. The direct suggestions related to reduction in arousal levels, gradual changes to her pattern of avoidance, and a greater ability to cope with her mind's natural healing processes. Post-hypnotic suggestions were made that she would take the positive and pleasurable feelings of hypnosis into the waking state and that she would practise self-hypnosis daily, experiencing a deeper trance with each attempt.

Marie was brought out of hypnosis by counting from 20 back to 1. We discussed her experiences at length. Marie stated that it had been a very pleasurable experience, but she was unable to recall all of the process. The visualisation experience had been very powerful and she reported she felt a sense of freedom and peacefulness while at the beach. She had particular memories of the bird circling above and said that she had actually become the bird, seeing the beach scene from above while experiencing the sensation of weightlessness and floating. This experience demonstrated Marie's capacity for dissociation. The session had been taped and Marie was asked to listen to the tape daily until the next consultation.

## **Session 6**

Marie reported that she had noticed some improvement in her condition and that she had spent the weekend at the coast where she felt "like the whole thing never happened." However, on returning home, symptoms of anxiety returned. She was still unable to enter her son's bedroom and felt panic whenever she passed the doorway. She was still experiencing sleep disturbance, nightmares, distressing flashbacks, irritability, and detachment. Marie reported that she had been listening to the tape of the first session regularly and had been achieving reasonably deep states of hypnosis.

Hypnosis was utilised in this session for the purpose of imaginal exposure. The same induction and deepening techniques were used, then the "safe place" beach scene was reinforced. The "theatre of the mind" technique (Bandler, 1985 in Evans, 1994), was used. This technique depends heavily upon imagery and dissociation. It requires the client in hypnosis to imagine they are sitting in the

middle of a movie theatre. On the screen before them is a black-and-white snapshot of themselves just before the traumatic incident. The client then floats out of their body up to the projection booth where they can watch themselves watching the screen with an image of the traumatic event on it. The snapshot on the screen is then transformed into a black-and-white movie of the event, which is to be watched from the beginning until the end of the experience. The movie is stopped at the end point and a colour snapshot is imagined. The client “jumps” into the colour image and runs the movie in reverse back to the very first snapshot (taking one or two seconds to do this). This process was repeated four times. Finally, the movie is run forward, with the client asked to see only the things that they did to maintain control, dignity and to protect the safety of others during their traumatic event.

The “theatre of the mind” technique was followed by “safe place” imagery and direct suggestions for ego strengthening.

Out of trance, Marie reported she had been able to achieve the images suggested throughout the exposure technique. She felt tired, but quite calm.

### **Session 7**

The third session of hypnosis utilised imaginative involvement and use of metaphors. The normal induction, deepening and beach scene images were used. The beach scene incorporated watching the sunrise over the horizon and suggestions of “breathing in” the golden energising rays. Suggestions were made for greater calmness, control, and mastery of anxiety. The image of the beach and the sun rising was anchored by instructing Marie to form a fist with her right hand and to make the image even more vibrant and concentrate on feelings of peacefulness, self-worth, and positive control, then to reinforce the kinaesthetic anchor by again forming a clenched fist. Direct suggestions were given to use this anchor when she experienced strong feelings of fear, anger, or anxiety.

Still in hypnosis, Marie was asked to mentally rehearse various scenarios, such as being able to walk calmly into her son’s bedroom, being able to spend time at home alone while listening to her favourite music, and walking calmly and confidently through her local shopping centre. Suggestions were then made that she mentally rehearse any other activities that she was aware that she had been avoiding. This session was also taped and suggestions were made to continue listening to it regularly.

### **OUTCOME**

Marie attended one more session, in which hypnosis was not used. She reported that she was feeling “emotionally stronger” and her anxiety had lessened. She was able to spend time alone in the house and firmly believed that, even if she was confronted by the assailant in public (not only had he been let out on bail,



he had been seen in the suburb where Marie lived), she would maintain control and walk quickly away to a safe place. In the last week Marie had experienced three nights of uninterrupted sleep, and on the nights when she had the nightmare she was able to better control the subsequent panic. Unfortunately Marie was still not able to enter her son's bedroom. She was embarrassed by this, saying it was "ludicrous" and "silly," but she "just froze" when she had attempted it. It was explained to Marie that this was perfectly understandable, but that the role of avoidance in maintaining PTSD meant that she would have to deal with this fear eventually. Encouragingly, Marie was experiencing a greater range of affect, being able to laugh and joke about some aspects of her avoidance behaviours. She was being more sociable and talking more freely with others about the incident. Marie's beliefs about her own "weakness" and "powerlessness" had changed completely. She now held the belief that a terrible and frightening thing had happened to her, through no fault of her own. She saw the event as a significant threat to her life at the time, but she had affected the outcome by maintaining self-control. She now saw the assailant as the one who was pathetic and weak and herself as relatively strong. Marie said that these changes in her thinking really made sense after the session where exposure techniques were used.

Marie was offered a referral and made aware that she could access further counselling through the victims-of-crime scheme, either with myself or another psychologist. She has not re-presented to date.

## REFERENCES

- Brown D. P., & Fromm, E. (1987). *Hypnosis and behavioral medicine*. New York: Lawrence Erlbaum Associates.
- Evans, B. J. (1994). *Hypnosis in the management of anxiety disorders*. Heidelberg: Australian Journal of Clinical and Experimental Hypnosis.
- Keane, T. (1995). The role of exposure therapy in the psychological treatment of PTSD. *The Clinical Quarterly*, 5, 1–6.
- Rothbaum, B. O., & Foa, E. B. (1996). Cognitive behavioural therapy for PTSD. In B. A. van der Kolk, A. C. Macfarlane, & I. Weisath (Eds.), *Traumatic stress: The effects of overwhelming experience on mind, body and society*. New York: Guilford.
- Spiegel, D., Hunt, T., & Dondershine, H. E. (1988). Dissociation and hypnotisability in PTSD. *American Journal of Psychiatry*, 145, 301–305.

## **A METAPHOR FOR HYPNOSIS**

**Antonio Capafons**

*University of Valencia*

**Ana Alarcón**

*University of Valencia*

**Martin Hemmings**

*University of Salamanca*

---

A study examined the nature and utility of a metaphor for hypnosis. After rapport-building and administration of one of two active hypnosis techniques (waking-alert hypnosis and active-alert hypnosis), a metaphor was offered to 60 volunteers. After metaphor, participants received the Barber Suggestibility Scale and the Metaphor Questionnaire from which participants' changes in attitude, comprehension of the metaphor, and imagination and experienced sensation variables were measured. Statistical analysis indicated that the metaphor was useful in consolidating attitudes toward hypnosis, while 70% of the participants thought that the metaphor would be useful for them in their everyday lives. No significant differences were found between imagination scores and comprehension of the metaphor. Suggestibility levels did not affect changes in attitude towards hypnosis. Women achieved significantly higher imagination and experienced-sensation scores than did men. It was concluded that the metaphor can be a useful complement to rapport-building.

### **INTRODUCTION**

Regardless of the treatment applied in psychotherapy, an explanation of what is to follow is usually given before undertaking any therapeutic sequence. This is what Frank (1985) calls the "therapeutic myth": the conceptual scheme which

---

Request for reprints should be sent to Antonio Capafons, Facultat de Psicologia, Avenida Blasco Ibáñez #21. 46010 Valencia (Spain). E-mail: antonio.capafons@uv.es

provides a plausible explanation of the client's problems, and helps in the "prescription" of a therapeutic procedure or "ritual." The hypnotic ritual, also, should be presented and explained to the client before putting it into practice. The way in which such a procedure is introduced is essential, when one considers that the hypnotic session may have very different courses depending on its introduction. In fact, various opposed attitudes and attributions can be activated or generated during the introduction (e.g., a sense of self-efficacy of the client vs. a sense of the therapist's power). Therefore, if the therapist's "power" is emphasised, the person can mistakenly attribute the therapeutic benefits almost exclusively to the therapist's skill and mastery, thus reducing the client's involvement in the therapy. In this way, many therapeutic aspects are diminished (e.g., the activation of a sense of competency in the client, the development of personal autonomy, and self-control). This would occur less if one appeals to the need for collaboration from the person, so the person attributes the result of the therapy to their own efforts.

Given the persistence, even today, of mistaken beliefs regarding the hypnotic context (Capafons, 1998a), we think that the "myth" which should be presented in this context ought to be directed at "demystifying" these erroneous concepts (especially those iatrogenic ones) by calling upon the client's active participation. When this is adequately carried out, the therapeutic task could be much less complicated. However, when this does not happen, the client can even refuse to be treated.

For this reason, Capafons conceived a strategy using a metaphor, so that hypnosis could be introduced and understood in simple terms while at the same time trying to eliminate erroneous or ambiguous concepts (Capafons, in preparation). But why not simply resort to a discourse by the therapist? The word metaphor comes from the Greek *meta* (beyond) and *pherin* (to carry): to carry out a transference of meaning from one field to another, that is, from a known field to a novel field. A metaphor is an active process with a specific objective, which becomes especially relevant to training in new skills situations (Gerrig & Gibbs, 1988). This is the case when the client comes into the hypnotic situation for the first time or when they come up against a different perspective on the hypnotic situation. Moreover, the metaphorical language is especially adequate when it comes to transmitting complicated information (Porush, 1987) and to integrating this information into memory (Kosslyn, 1981).

Although metaphors have always been used in psychotherapy (Siegelman, 1990), in the field of hypnosis, the best of these are in the work of Milton Erickson. Erickson used stories and a very flexible type of therapy to create structure analogous to the problem and to the client's life (Lankton & Lankton, 1983). One of the main advantages which recounting stories and metaphors has is that they can be offered to the client in an unthreatening manner which facilitates the relationship between the therapist and the client. It deepens, also, internal communications between the client and their unconscious mind and allows the individual to respond comfortably to treatment, accepting it internally

at their own pace (Dolan, 1985). In this context metaphors are presented as a way of helping the individual to develop a greater sense of confidence and self-esteem when the metaphors are presented to the unconscious mind (Erickson & Rossi, 1979; Lankton, 1980).

The second important thread which has influenced the clinical use of metaphors comes from child psychotherapy (Gardner, 1977). Many therapeutic “stories” have been used to provide a coherent framework to the child’s problem and possible solutions (Rhue & Lynn, 1991).

The use of metaphor proposed by Capafons (1999) meets the four criteria described by Brown (1993): (a) establish the therapeutic context, (b) facilitate induction and hypnotic phenomena, (c) stimulate the solution of the client’s problem, and (d) generalise the effects of treatment to future problems. Nevertheless, Capafons’ use of metaphor is slightly different from Erickson’s use of metaphor (Zeig & Rennick, 1991) because, not only is the significance of the symbolism explicated, but it is also undertaken from a behavioural perspective through which it is assumed that exposure to the feared stimulus in the imagination is useful in preparing the person for exposure to anxiety-producing stimulus *in vivo*. Another difference is that such metaphors are directly formulated, in contrast to the indirect style of Ericksonian metaphors. The fact that metaphors are not communicated in an indirect fashion would not affect their efficacy, given that direct and indirect communication styles are equally effective (Fourie, 1997; Matthews, Conti, & Starr, 1998).

In order to apply the present metaphor (described in full in Appendix A), the person must have been hypnotised (using either hetero or self-hypnosis, preferably the latter). Research shows that the metaphor will have greater impact when used with the subject in trance (McConkey & Jupp, 1986).

Once the person has been hypnotised they are asked to imagine the situation which is about to be described to them (the metaphor). Clients imagine themselves coping with a series of difficulties which they will resolve successfully (in order to increase ego strength). The problems are solved by the client’s efforts, using a tool which is of great help to them (the hypnosis, represented by a machete). Thus, the person learns that they should actively work at resolving their problems relying, at the same time, on the invaluable aid of hypnosis. The symbol of the machete is appropriate because it implies a number of basic points:

1. Although something might initially appear dangerous and frightening, it might turn out to be a very valuable tool (just as with hypnosis).
2. By itself the machete is not much use. It is a useful instrument providing one knows how to use it correctly and creatively (just as with hypnosis).
3. If one handles it properly, the machete can prove useful for a wide range of problems and situations (a general coping strategy, just as with hypnosis).

From our cognitive-behavioural conception of hypnosis, introducing and demystifying hypnosis is a fundamental part of the hypnotic phenomena. One

of the intentions of the metaphor proposed by Capafons is precisely to help the person to understand the significance of both hetero and self-hypnosis, introducing them as something controllable and effective, and at the same time free of danger if they are used correctly (Capafons, 1998a).

We would like to underline that this research is preliminary and exploratory. The aims of the research were as follows: (a) to verify whether or not the metaphor helps to foster and consolidate a positive attitudinal change toward hypnosis; (b) to verify whether or not such a change is affected by the use of imagination and sensations suggested in the metaphor; and (c) to verify gender differences in using imagination and experiencing the sensations suggested in the metaphor.

## **METHOD**

### **Participants**

The sample used consisted of 60 volunteers who were blind as to the objectives of the study and who received neither academic nor monetary compensation of any kind for their participation in the study. The sample was made up of 15 male and 45 female participants, the majority of whom were psychology students (age range 1–51 years:  $\chi = 24$ ; SD = 5.65).

### **Measures**

1. The Barber Suggestibility Scale (BSS; Barber & Wilson, 1979): The objective scale has a maximum score of 8, and is scored by the researcher; the subjective scale is completed by participants, with a maximum possible score of 24.
2. The Metaphor Questionnaire (designed for experimental purposes): The questionnaire has 24 items, the first 18 items of which measure imaginative capacity and intensity of the scenes described by the metaphor. The remaining six items evaluate participants' thoughts regarding the efficacy of the metaphor in helping them understand hypnosis.

### **Procedure**

The metaphor was administered after the application of an active hypnosis technique. Half of the subjects were introduced to the metaphor after application of the waking-alert hypnosis technique (Capafons, 1998a) and the other half after the active-alert hypnosis technique (Bányai, Zseni, & Túry, 1993). Before applying the techniques, some time was given to establishing rapport and demystifying hypnosis. Two hypnotic techniques were used to assess pleasantness and suggestion factors in both methods (Alarcón, Capafons, Bayot, & Cardeña, in press; Cardeña, Alarcón, Capafons, & Bayot, 1998). The Barber Suggestibility

Scale was applied first, followed by the Metaphor Questionnaire, in this case after de-hypnotising the participant.

## Results

To better comprehend the results section, the reader is referred to the Metaphor Questionnaire (see appendix B)

An exploratory main component factorial analysis was performed to verify the statistical correctness of using a combined total score of the first 18 items of the questionnaire.

Changes in attitude score were also derived from the remaining six items on the Metaphor Questionnaire. A change in attitude is considered to have occurred when a previously held erroneous belief has been modified after exposure to the metaphor.

Percentages and chi-squared results were obtained from the items concerning hypnosis comprehension. After having been introduced to the metaphor, 80% ( $\chi^2 = 1.79$ ;  $p = 0.003$ ) understand the significance of the machete; 96.7% ( $\chi^2 = 4.18$ ;  $p = 0.0005$ ) believe that hypnosis is not dangerous; 81.7% ( $\chi^2 = 3.80$ ;  $p = 0.0005$ ) consider that hypnosis is useful; 95% ( $\chi^2 = 4.18$ ,  $p = 0.0005$ ) believe that the fact that they were introduced to the metaphor may be useful for them in their everyday lives; 70% ( $\chi^2 = 36.4$ ;  $p = 0.005$ ) think that hypnosis is a technique adjunct to a treatment but not a treatment in itself, and 67.7% ( $\chi^2 = 3.26$ ;  $p = 0.07$ ) changed their opinion with respect to hypnosis. The last item's failure to obtain significance may be explained by the fact that 36.7% of the participants already had a positive opinion of hypnosis before listening to the metaphor and thus did not change their opinion. However, what this statistic does reveal to us is the utility of the metaphor when it comes to consolidating attitudes.

On the other hand, this positive acceptance of hypnosis is not affected either by the use of imagination or by the sensations experienced on applying the metaphor, given that all of the chi-squared tests failed to show any statistically significant differences.

An analysis of variance test was performed to see if significant gender differences in imagination and sensations existed. Women obtained a higher mean score than men (females  $\chi = 26.64$ ; males  $\chi = 17.53$ ), a difference that was statistically significant ( $F(1 / 58) = 11.71$ ;  $p = 0.01$ ,  $\eta^2 = 0.17$ ). Women in the study made greater use of their imagination and they also experienced the scenes described in the metaphor with greater intensity.

## CONCLUSIONS

Females' higher scores on imagination and sensations experienced in the metaphor might be due to women becoming more involved in the metaphor because they find themselves confronting successfully a situation which is socially considered as a masculine one. Moreover, it is possible that, due to the

conception of social functions in our society, women are less reluctant to relate greater levels of “anxiety.”

Given these results, we can conclude that the metaphor, as a complement to establishing rapport, would appear to help to achieve a better understanding of hypnosis. Moreover, we should not underestimate its potential value as a coping model, given that, as we have already mentioned, the participants consider familiarity with the metaphor might be of use to them in everyday life. Likewise, the metaphor’s understanding is not affected by aspects of imagination or by the experience of the sensations suggested by it. This indicates that even people with a low imaginative capacity can benefit from metaphor.

The fact that no correlation exists between suggestibility and attitude change towards hypnosis is of great clinical value given that, regardless of individual levels of suggestibility, most clients can benefit from the use of metaphors.

By way of conclusion we would like to mention that the application of the metaphor acquires its full meaning in the therapeutic context as part of an elaborated process where the final objective is not just to increase the efficacy of the hypnotic techniques but also to increase their efficiency (Capafons, 1998b).

As we have already mentioned our research is basically exploratory. Thus, other possibilities to be researched are: the use of a questionnaire regarding attitudes towards hypnosis before and after use of the metaphor, to determine what kind of changes are produced; an exploration of the metaphor’s potency with persons with different levels of rejection of hypnosis; follow-up studies to verify whether or not becoming familiar with the metaphor is useful in everyday life; an exploration of the effects of the metaphor on participants who are not hypnotised; replication with a sample of participants with a particular problem to be treated, thus verifying whether or not the metaphor is useful as a general coping strategy for such problems. The results presented here are heuristic and not definitive in nature.

## REFERENCES

- Alarcón, A., Capafons, A., Bayot, A., & Cardeña, E. (in press). Preference between two methods of active-alert hypnosis: Not all techniques are created equal. *American Journal of Clinical Hypnosis*.
- Bányai, É. I., Zseni, A., & Túry, F. (1993). Active-alert hypnosis in psychotherapy. In J. W. Rhue, S. J. Lynn, & I. Kirsch (Eds.), *Handbook of clinical hypnosis* (pp. 271–290). Washington, DC: American Psychological Association.
- Barber, T. X., & Wilson, S. C. (1979). The BSS and the CIS: Experimental and clinical applications. *American Journal of Clinical Hypnosis*, 21, 81–108.
- Brown, P. (1993). Hypnosis and metaphor. In J. W. Rhue, S. J. Lynn, & I. Kirsch (Eds.), *Handbook of clinical hypnosis* (pp. 291–308). Washington, DC: American Psychological Association.
- Capafons, A. (1998a). Hipnosis clinica: Una visión cognitivo-comportamental [Clinical

- hypnosis: A cognitive-behavioral perspective]. *Papeles del Psicólogo*, 69, 71–88.
- Capafons, A. (1998b). Rapid self-hypnosis: A suggestion method for self-control. *Psicothema*, 10, 571–581.
- Capafons, A. (in preparation). *Clinical applications of waking hypnosis: From efficacy to efficiency*.
- Cardena, E., Alarcón, A., Capafons, A., & Bayot, A. (1998). Effects on suggestibility of a new method of active-alert hypnosis. *International Journal of Clinical and Experimental Hypnosis*, 45, 280–294.
- Dolan, Y. M. (1985). *A path with a heart: Ericksonian utilization with resistant and chronic clients*. New York: Brunner/Mazel.
- Erickson, M. H., & Rossi, E. L. (1979). *Hypnotherapy: An exploratory casebook*. New York: Irvington.
- Fourie, D. P. (1997). Indirect suggestion in hypnosis: Theoretical and experimental issues. *Psychological Reports*, 80, 1255–1266.
- Frank, J. (1985). Therapeutic components shared by all psychotherapies. In M. Mahoney, & A. Freeman (Eds.), *Cognition and Psychotherapy* (pp. 49–79). New York: Plenum Press.
- Gardner, R. (1977). *Therapeutic communication with children: The mutual storytelling technique*. New York: Aronson.
- Gerrig, R. J., & Gibbs, R. W. (1988). Beyond the lexicon: Creativity in language production. *Metaphor and Symbolic Activity*, 3, 1–19.
- Kosslyn, S. M. (1981). The medium and the message in mental imagery: A computational approach. *Psychological Review*, 94, 46–66.
- Lankton, S. R. (1980). *Practical magic*. Cupertino, CA: Meta Publications.
- Lankton, S. R., & Lankton, C. H. (1983). *The answer within: A clinical framework of Ericksonian hypnotherapy*. New York: Brunner/Mazel.
- Matthews, W. J., Conti, J., & Starr, L. (1998). Ericksonian hypnosis: A review of the empirical data. In W. J. Matthews & J. Edgette (Eds.), *Current thinking and research in brief therapy, solutions, strategies, narratives: (Volume II)*, pp. 239–263. Philadelphia: Taylor & Francis.
- McConkey, K. M., & Jupp, J. J. (1986). A survey of opinions about hypnosis. *British Journal of Experimental and Clinical Hypnosis*, 2, 87–93.
- Porush, D. (1987). What Homer can teach technical writers: The mnemonic value of poetic devices. *Journal of Technical Writing and Communication*, 17, 129–143.
- Rhue, J. W., & Lynn, S. J. (1991). Storytelling, hypnosis and the treatment of sexually abused children. *International Journal of Clinical and Experimental Hypnosis*, 39, 198–214.
- Siegelman, E. Y. (1990). *Metaphor and meaning in psychotherapy*. New York: The Guilford Press.
- Zeig, J. K., & Rennick, P. J. (1991). Ericksonian hypnotherapy: A communication approach to hypnosis. In S. J. Lynn & J. W. Rhue (Eds.), *Theories of hypnosis: Current models and perspectives* (pp. 275–300). New York: The Guilford Press.

## APPENDIX A



## **Metaphor**

Now imagine that you are driving a jeep through the South American jungle. You are travelling through a forest road, among giant trees, close to an equatorial river. You are going to a town where your expedition companions are waiting for you. Going by car it does not take more than an hour, but walking would take you about five. All of a sudden your car stops. You are surprised to find that you are out of gas. The sun is setting and it will be dark soon. You are afraid because you do not have supplies or water. You cannot even start a fire. The jungle is full of dangerous insects and deadly creatures, and you have nothing to defend yourself against them. You look at the additional gas tank, but it is also empty. You try to start the jeep, but there is no sound. You notice your anxiety [the therapist describes the patient's anxiety reactions]. You become more and more worried. You know that it can be very dangerous to try to walk to the village, and a death sentence to stay by the jeep. You are tense and confused, and desperately look for something that will get you out of this mess. Suddenly you find a very big machete. This scares you. It seems that the machete is a sharp and dangerous weapon, but you have no option. Reluctantly, you grab the machete. It frightens you but it is the only thing you have to save your life. You try to think what to do. Fear and uncertainty cloud your thoughts. But you suddenly realise that the river is close to the road you are on. You remember that the town is on the other side of the river. If you could cross it, you should shortly be in a safe place. Then, you decide to go for it. You start walking towards the river, strongly cutting the vines, bushes and shrubs that hinder your way with the machete. You are becoming more and more tired. The hand and arm with which you are holding the machete are increasingly fatigued and they are starting to hurt. Your feet seem exhausted and your legs seem to bend. You are increasingly tired, you are hungry and thirsty, but you continue clearing the path without pause. Suddenly, from within the trees a giant serpent with dangerous fangs attacks you. You are very scared and can barely avoid it. You know that the serpent wants to devour you. It is coming to you so fast that you can even smell its fetid breath. Just then, with a precise stroke of the machete, you behead it. You feel nauseous when you see the head separated from the body, which is still moving and from which blood is spurting. Nonetheless, you do not give up because you know that you have the machete to help you to continue struggling to reach your objective. You continue marching towards the river with self-assuredness, clearing a path through the jungle. Finally you reach the river's edge but notice with surprise and despair that the river is enormous and turbulent. You also remember that it is full of piranhas that would devour you in a few minutes. You are again overwhelmed by anxiety, fear, confusion, and despair. You are very tired and it is getting

darker. But you remember that you still have the machete. You rapidly start to cut some small trees and lianas. With them, despite the pain in your hands and the overwhelming fatigue, you build a raft. In it you will be able to cross the river safely and reach the town's port where they are waiting for you and you will be safe. Once the raft is finished you enter the river, armed with an oar which you have built. There are very strong currents and raft is unstable. Once again you are scared, but you know that you are close to your goal. You can see the lights of the town and even hear some distant voices. You imagine how you will be received when you reach the port. You will feel satisfied, sure of your strength and ability. Your associates, bewildered, will greet you with admiration. And, above all, you will have solved your problem with your own effort and courage. You use the oar strongly, despite the river's rapids and the protruding rocks that could destroy the raft. Finally you reach the port. A number of people are waiting for you, amazed and admiring. You feel satisfied, happy, self-confident. You are no longer afraid. You have reached your objective, through your effort, perseverance, and reasoning, which have allowed you to overcome hopelessness, fear, and confusion. You know that with the machete you have been able to untangle and eliminate the obstacles in your path. You have been able to ward off the attacks of your enemies. You have got rid of what prevented you from reaching your goal, your objective. But you also know that this is not enough. It is not enough to firmly and decisively get rid of the obstacles. You have had to run risks, design and build something new to reach your goal. You have built the raft, a new way of transportation. And you have achieved all this with the help of the machete. It is a frightening instrument, but when you understand it and use it with decision, it can become a peerless instrument to go forward in the path we have traced.

This is like life. We have to fight, struggle and persevere to attain what we aim for (decrease our fears, improve our habits, etc.), to eliminate hindrances and obstacles, but also to create new ways of life and relationships; to open new options by taking the risk of changing our life or the way we see it. The machete is like hypnosis. It seems dangerous and it scares us. But if we use it with cunning, intelligence, courage, and dexterity it becomes an instrument that can be of great benefit to reach our goals and objectives. The machete is the self-hypnosis. You can use it whenever you wish. But remember, it is a help to overcome your problems. Without your industry, perseverance, effort, courage and creativity, it is of no use whatsoever. Do remember that every time that you are afraid, confused or in despair, you can say the word "machete" to yourself and focus on the arm dissociation. At that moment, you will be able to control your anxiety and give yourself therapeutic suggestions so that, in such a way, you can look for the best solutions to the problems you may be facing.

**APPENDIX B**

**Questionnaire on the Metaphor for Hypnosis**

Participant No.

Name.

1. Were you able to you visualise the image of the jungle?  
NO YES

Please indicate to what extent:

Very real      Somewhat real      Not very real      Not real at all

*Comments:*

2. Did you feel afraid in the scene where you ran out of gas at nightfall and were left defenceless?  
NO YES

Please indicate to what extent:

Not at all      A little      Very much so      Absolutely

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

3. Did you experience anxiety (nervousness) when you tried to start up the jeep and it did not start?  
NO YES

Please indicate to what extent:

Not at all      A little      Very much so      Absolutely

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

4. Did you feel tense and disoriented in the scene mentioned above?  
NO YES

Please indicate to what extent:

Not at all      A little                      Very much so      Absolutely

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

5. Were you able to visualise the machete?  
NO YES

Please indicate how real it seemed:

Not real at all      Not very real      Somewhat real      Very real

*Comments:*

6. Were you frightened by the sharpened machete?  
NO YES

Please indicate to what extent:

Not at all      A little                      Very much so      Absolutely

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

7. Did you feel tired while you were cutting your way through the bushes and vines?  
NO YES

Please indicate to what extent:

Not at all      A little                      Very much so      Absolutely

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

8. Did you feel hungry or thirsty as you became more and more tired?  
NO YES

Please indicate to what extent:

Not at all      A little                      Very much so              Absolutely

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

9. Did you visualise the scene in which the serpent was described?  
NO YES

Please indicate how real it seemed:

Very real      Somewhat real      Not very real              Not real at all

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

10. Were you frightened during the scene with the serpent?  
NO YES

Please indicate to what extent:

Not at all      A little                      Very much so              Absolutely

*Comments:*

11. Did you perceive the serpent's fetid breath?  
NO YES

Please indicate how real it seemed:

Very real      Somewhat real      Not very real              Not real at all

*Comments:*

12. Were you disgusted in the scene where the snake's head got cut off?  
NO YES

Please indicate to what extent:

Not at all      A little                      Very much so      Absolutely

*Comments:*

13. Did you visualise the scene which described the piranha-infested river?  
NO YES

Please indicate how real it seemed:

Very real      Somewhat real      Not very real      Not real at all

*Comments:*

14. Did you feel afraid at the possibility of not being able to cross the river due to the fact that the piranhas might devour you?  
NO YES

Please indicate to what extent:

Not at all      A little                      Very much so      Absolutely

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

15. Did you visualise the scene where you built a raft?  
NO YES

Please indicate how real it seemed:

Very real      Somewhat real      Not very real      Not real at all

*Comments:*

16. Were you frightened by the rapids and the destabilising effect that they had on your raft?  
NO YES

Please indicate to what extent:

Not at all      A little                      Very much so      Absolutely

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

17. Did you visualise the scene where you arrived at the village and everyone welcomed you?

NO YES

Please indicate how real it seemed:

Very real      Somewhat real      Not very real      Not real at all

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

18. Did you experience a sense of “self-security” knowing that you had the machete with you?

NO YES

Please indicate to what extent:

Not at all      A little      Very much so      Absolutely

*Did you experience any other types of sensations?*

*If so, can you describe them?*

*Comments:*

19. In general, would you say that you understand the analogy of the “machete” and what it stands for?

NO YES

20. Having been introduced to the metaphor, has your opinion about hypnosis changed at all?

NO YES

*If so, in what way?*

21. Having been introduced to the metaphor, do you believe that hypnosis is more of a help (technique) than an actual treatment in itself?

NO

YES

22. Having been introduced to the metaphor, do you believe that hypnosis is dangerous?

NO

YES

23. Having been introduced to the metaphor, do you believe that hypnosis is useful?

NO

YES

24. Do you believe that this metaphor can be useful in your everyday life?

NO

YES

*What for?*



## CASE NOTES

---

The aim of Case Notes is to enable readers to contribute brief items and case material drawn from their own experience. These may be case situations in which hypnosis has been used in treatment or a description of specific hypnotherapeutic techniques used within treatment contexts. The contributor is asked to supply as much information as is needed to ensure the reader has an understanding of the situation, the therapeutic aims of the hypnosis, and outcomes. It may also be appropriate for the contributor to review the relevant research and clinical literature to justify and explain their use of hypnosis. While the standard criteria for publications in the Journal will not apply to Case Notes, a clear exposition of the ethical professional practice of hypnosis will be required if the material is to be published.

## USE OF HYPNOSIS TO IMPROVE BOWLING SCORES

**Elliott H. Schreiber**

*Rowan University*

---

This case reports on the use of hypnosis for improving the scores of bowlers. An analysis was made of hypnosis with a female and male bowler. Both individuals were motivated and were seen to improve their concentration, focus, and motor skills in bowling. They were seen for five sessions of hypnosis and were able to improve their bowling score average by 35 to 40 points. Some suggestions for further studies are made.

Athletes and coaches have increasingly begun to see that endurance, strength, speed, coordination, and other athletic abilities are not in themselves enough to produce a champion. Research reveals that the mental aspects of sport performance are crucial determinants of success and failure. The basic reason for this recent emphasis on the psychological traits of athletics is that, at the

highest levels of competition, differences in skill level itself are generally minimal. Iso-Ahola and Hatfield (1986) indicated that the edge in sport performance lies in the psychological preparation of athletes.

Some techniques directed toward the facilitation of athletic performance have been developed and utilised. The overall purpose of these strategies is to correct dysfunctional thought, behaviour, and emotion in order that the athlete can reach his or her full potential (Butt, 1987; Schreiber, 1991).

The objective of this brief report was to study the influence of hypnosis in improving the scores of bowlers. Barber (1966) feels that some of the findings on hypnosis and sports are conflicting. However, Bankov (1973), Kroger (1977), Naruse (1965), Onestak (1991), and Taylor, Horevitz, and Balague (1993) state that hypnosis is instrumental in increasing motivation, achievement, and motor skills. The research of these authors motivated this investigation.

The first bowler is a 27-year-old, single female who lives in New Jersey. She is a junior in college and is a "B" student. She has belonged to a social bowling league for a period of seven years and started bowling at 14 years of age. The client works on a full-time basis in the business field. She has a number of friends and is doing well in the community.

Since joining a social bowling league, she has improved her average score to 165 and has maintained this average for a period of 18 months in league bowling. She bowls an average of twice per week and was concerned about improving her scores in order to move into a semi-professional bowling league.

A colleague referred her as she was interested in hypnosis for improving her bowling scores. She was seen for a preliminary session and described her interests and background. She was highly motivated and was a good client for hypnosis.

In the second session, the sensory relaxation techniques of Erickson, Rossi & Rossi (1976) were employed for the induction of hypnosis. The client was placed in a medium state of hypnosis (Hilgard, 1965). She revealed glove anaesthesia through suggestion in a medium state of hypnosis and was told to relax and visualise herself in a bowling setting. About 15 minutes into the hypnosis session, she was asked to visualise a dotted line from her starting point in the lane to the bowling pins. Along with this, she was told to picture the bowling pins as being twice their normal size and that the bowling ball would hit the pins dead centre, causing a strike. Also, she would be able to have excellent concentration and close out all surrounding distractions. At the end of the session, she was instructed to practise this mental imagery twice per day for 10 minutes each time, utilising it while participating in a league game.

The third, fourth, and fifth hypnosis sessions utilised similar instructions and procedures as the second session. She was also told to practise visual scenes and mental imagery twice per day. The first five sessions were held on a weekly basis. The sixth hypnosis session was used for reinforcement purposes and was held one month later.

This client improved her bowling scores by 10 points in the second, third, fourth, and fifth sessions. Overall, she increased her bowling scores by a total of 40 points while maintaining a bowling average of 205 for 28 consecutive games. She indicated the hypnosis sessions helped her to focus better and close out all distractions. Along with this, she felt relaxed and motivated to achieve.

A second case study is of a male bowler who was seen for improvement of his scores with hypnosis. He is a 29-year-old married male who lives in Pennsylvania. He is a senior in college and is an education major with a “B+” average. The client has belonged to a social bowling league for eight years. He started bowling at 12 years of age with his father. He plans to be a secondary school teacher and currently works in retail sales.

The client has a bowling average of 180 and maintained this average for 12 months in league bowling. He bowls on an average of twice per week and wanted to improve his scores in league bowling with the objective of moving into a semi-professional bowling league.

The initial session was used to learn about his background and to introduce him to hypnosis. He was motivated to participate in hypnosis and gave his permission.

In the second session, he was placed in a state of hypnosis using the sensory relaxation techniques of Erickson, Rossi, & Rossi (1976). The client was put in a medium state of hypnosis (Hilgard, 1965) which was determined by glove anaesthesia. He was instructed to relax and visualise himself in a bowling lane. About 12 minutes into the hypnosis session, he was told to picture a dotted line from the starting point in the lane to the bowling pins. He was instructed to visualise the bowling pins as being double their normal size, and the bowling ball would hit the pins dead centre to bring about a strike. Along with this, he was told, under hypnosis, that he would have excellent concentration, great aim, and would be able to close out all distractions in his environment. Toward the end of the session, he was instructed to practise this visual imagery twice per day for 10 minutes, and to use it while playing in a league game.

The third, fourth, and fifth hypnosis sessions utilised similar instructions and procedures as the second hypnosis session. He was also instructed to practise visual scenes and mental imagery for 10 minutes in the morning and 10 minutes in the evening.

The client improved his bowling scores by 5 points in the second session and by 10 points in each of the following three sessions. Thus, he increased his bowling scores by a total of 35 points with hypnosis sessions on a weekly basis.

A follow-up session was not held because the client finished his college classes for the semester and left the area. However, he wrote to me two months later, indicating he was able to maintain a bowling average of 215 for 20 consecutive games. He related that the hypnosis helped to improve his concentration, perception, and coordination skills.

An analysis of these two clients revealed that hypnosis can be very useful in

improving an individual's perception, concentration, and psychomotor coordination. Both clients reported that hypnosis was valuable in improving their skills, focus, and bowling scores. More investigation is needed on larger and varied populations of bowlers with the use of hypnosis. The findings suggest that single subject designs (Bryan, 1987; Smith, 1988; Wollman, 1986) warrant further study on the athletic field.

## REFERENCES

- Bankov, M. (1973). Autogenic training, hypnosis, revelation and psychosomatic modeling and psychotherapeutic methods for athletes. *Psychotherapy Psychosomatic*, *21*, 62.
- Barber, T. X. (1966). The effects of hypnosis and motivational suggestions on strength and endurance: A critical review of research studies. *British Journal of Social and Clinical Psychology*, *5*, 42–50.
- Bryan, A. J. (1987). Single subject designs for evaluation of sport psychology interventions. *Sport Psychologist*, *1*, 283–292.
- Butt, D. S. (1987). *Psychology of sport*. New York: Van Nostrand Reinhold.
- Erickson, M. H., Rossi, E. L., & Rossi, S. (1976). *Hypnotic realities*. New York: Irvington.
- Hilgard, E. R. (1965). *Hypnotic susceptibility*. New York: Harcourt, Brace, & World.
- Iso-Ahola, S. E., & Hatfield, B. (1986). *Psychology of sports*. Dubuque, IA: William C. Brown.
- Kroger, W. S. (1977). *Clinical and experimental hypnosis*. Philadelphia: J. B. Lippincott.
- Naruse, G. (1965). The hypnotic treatment of stage fright in champion athletes. *International Journal of Clinical and Experimental Hypnosis*, *13*, 63–70.
- Onestak, D. M. (1991). The effects of progressive relaxation, mental practice, and hypnosis on athletic performance: A review. *Journal of Sport Behavior*, *14*, 247–282.
- Schreiber, E. H. (1991). Using hypnosis to improve performance of college basketball players. *Perceptual and Motor Skills*, *72*, 536–538.
- Smith, R. E. (1988). The logic and design of case study research. *Sport Psychologist*, *2*, 1–12.
- Taylor, J., Horevitz, R., & Balague, G. (1993). The use of hypnosis in applied sport psychology. *The Sport Psychologist*, *17*, 58–78.
- Wollman, N. (1986). Research on imagery and motor performance: Three methodological suggestions. *Journal of Sport Psychology*, *3*, 135–138.

*Announcing a new journal  
for health professionals interested in  
Mental Health Issues and Mental Health Promotion*

# **Mental Health Australia**

*The Journal of the Mental Health Foundation of Australia*

**Volume 1, Number 1**

**July 1999**

MENTAL HEALTH PROMOTION: A STRATEGIC APPROACH

*Rhonda Galbally AO*

HOMELESSNESS IN MENTALLY ILL PEOPLE:

UNDERSTANDING THE RISKS AND SERVICE NEEDS

*Helen Herrman*

PROBLEM GAMBLING: A CURRENT MENTAL HEALTH ISSUE

*Greg Coman and Graham Burrows AO, KSJ*

APPLYING A HEALTH PROMOTION APPROACH TO EXERCISE FOR  
PEOPLE WITH A CHRONIC MENTAL ILLNESS

*Judi Porter and Sandra Capra*

MENTAL HEALTH PROMOTION:

A COMMUNITY-BASED INNOVATION

*Barry Evans and Graham Burrows AO, KSJ*

*Subscribers to AJCEH receive a discounted subscription to*

## **Mental Health Australia**

*Subscribe now to Volume 1, Number 1 and receive Volume 1, Number 2 FREE*

***To receive your copy write or fax to:***

PO BOX 592, HEIDELBERG, VIC 3084 Fax to: (03) 9496 4564

**The Australian Journal of Clinical and  
Experimental Hypnosis**

**Hypnosis in Australia**

The definitive hypnosis handbook for the new millennium, providing a comprehensive literature review and clinical guide to hypnosis practice in the major therapeutic applications

*23 major chapters covering:*

Ericksonian and indirect techniques in therapy

Treatment of pain

Psychoneuroimmunology, hypnosis, and mind-body healing

Uses of music and imaginative involvement in therapy

Hypnosis in the management of anxiety disorders  
and post-traumatic stress disorders

Hypnosis for habit disorders (eating disorders, smoking, and gambling)

Hypnosis for ego-enhancement and performance enhancement

Uses of hypnosis with children and adolescents

Forensic uses of hypnosis and recovery of memories through hypnosis

Research and clinical assessment of hypnotisability

**THIS HANDBOOK IS A MUST FOR  
EVERY HYPNOSIS PRACTITIONER**

All anthologies and clinical handbooks published by the *Australian Journal of Clinical and Experimental Hypnosis* can be obtained from the Editorial Assistant, AJCEH, PO Box 592, Heidelberg, Victoria 3084, Australia. Please use the Order Form later in this edition of the journal.

# Hypnosis in Australia

*Edited by Barry J. Evans and Graham D. Burrows AO KSJ*

Approx 395 pages, hardcover, \$45.00 (ASH members), \$50.00 others, available immediately

## CONTENTS

Foreword .....	<i>Graham Burrows</i>
Introduction .....	<i>Barry Evans</i>
Experiential approaches to clinician development .....	<i>Jeffrey Zeig</i>
Treatment of pain in children and elders: Words are not enough .....	<i>Sam LeBaron</i>
Combining music and words as a pathway through hypnosis:	
Practical guidelines .....	<i>Wendy-Louise Walker</i>
Anxiety disorders, post-traumatic stress	
disorders, and hypnosis .....	<i>Barry Evans and Greg Coman</i>
Psychoneuroimmunology and mind-body healing .....	<i>Roger Booth</i>
An hypnotic protocol for eliciting physical changes	
through suggestions of biochemical responses .....	<i>Antonio Madrid and Susan Barnes</i>
Effects of hypnosis on the immune response:	
B-cells, T-cells, and suppressor cells .....	<i>Patricia Ruzyla-Smith et al.</i>
Dissociation, dieting disorders, and hypnosis:	
A review .....	<i>Rosalyn Griffiths and Lorna Channon-Little</i>
Hypnosis for anorexia nervosa and bulimia nervosa: An update .....	<i>Rosalyn Griffiths</i>
Hypnosis as an adjunct to the treatment of bulimia nervosa .....	<i>Rosalyn Griffiths</i>
Hypnosis for problem gambling .....	<i>Greg Coman and Graham Burrows</i>
Hypnosis and smoking cessation .....	<i>Barbara Newton</i>
Self-esteem, hypnosis,	
and ego-enhancement .....	<i>Simon Stafrace, Barry Evans, and Graham Burrows</i>
Ego-enhancement for positive change .....	<i>Harry Stanton</i>
Gurdjieff and ego-enhancement: A powerful alliance .....	<i>Harry Stanton</i>
Recovered memory, hypnosis, and professional issues .....	<i>Kevin McConkey and Peter Sheehan</i>
Hypnosis with children and adolescents: Some developmental considerations .....	<i>Lachlan Lipsett</i>
Induction and deepening techniques with children .....	<i>William Wester II</i>
Special considerations for using hypnosis with young children .....	<i>Leora Kuttner</i>
The use of hypnosis with children and adolescents .....	<i>Chrissi Hart and Barry Hart</i>
Revisiting the question: What is Ericksonian hypnosis? .....	<i>Michael Yapko</i>
Ericksonian hypnosis: A perspective on direct and indirect methods .....	<i>Jeffrey Zeig</i>
Clinical applications of hypnotic assessment .....	<i>Kathleen Moore and Vicky Powlett</i>

**The Australian Journal of Clinical and  
Experimental Hypnosis**

## **Hypnosis for Weight Management and Eating Disorders**

This clinical handbook contains reviews of current research and clinical practice, providing the reader with a comprehensive understanding of the classifications, aetiology, and treatment of the disorders. There is, of course, a detailed focus on the use of hypnosis in treatment. Many chapters have been specially written for the handbook by Australian and overseas experts, with supplementary chapters reporting clinical applications and case studies.

All anthologies and clinical handbooks published by the *Australian Journal of Clinical and Experimental Hypnosis* can be obtained from the Editorial Assistant, AJCEH, PO Box 592, Heidelberg, Victoria 3084, Australia.



# Hypnosis for weight management and eating disorders

*Barry J. Evans, Greg J. Coman, and Graham D. Burrows AO KSJ (Eds)*

304 pages, softcover, \$35.00 (ASH members), \$40.00 others, available immediately

## Contents

### Introduction

Psychological issues in weight management. . . . . *Greg J. Coman and Barry J. Evans*

Eating attitudes and behaviours in the normal population. . . *Nicole Lefkowitz and Barry J. Evans*

### Obesity and Weight Management Counselling

Introduction. . . . . *Barry J. Evans*

Psychotherapy and hypnotherapy in the  
treatment of obesity. . . . . *Fiona K. Judd and Graham D. Burrows*

Treatment issues in weight management counselling . . . . . *Susan Hook*

Psychotherapy and hypnotherapy for overweight and obesity counselling. . . *Diane J. McGrail*

Weight management: A cognitive behavioural approach,  
utilising hypnosis as a treatment strategy . . . . . *Brian T. Jacka*

Hypnotic treatment of obesity in a general practice . . . . . *Scott Inglis*

Hypnosis in a self-control behaviour modification program  
for weight reduction . . . . . *Lorna D. Channon-Little*

### Bulimia Nervosa

Introduction. . . . . *Barry J. Evans*

The nature and aetiology of bulimia nervosa . . . . . *Rosalyn A. Griffiths*

Hypnosis as an adjunct in the treatment of bulimia nervosa . . . . . *Rosalyn A. Griffiths*

Hypnosis in the treatment of bulimia nervosa: A review of the literature . . . . . *Greg J. Coman*

Some similarities between disordered drinking and eating patterns:  
Case illustrations and implications for treatment . . . . . *Lorna D. Channon-Little*

Hypnosis in the treatment of bulimia nervosa: A case study . . . . . *Rosalyn A. Griffiths*

Hypnobehavioural treatment for bulimia nervosa: A treatment manual . . . *Rosalyn A. Griffiths*

The use of hypnotherapy in the treatment of eating disorders. . . . . *Delia Young*

Group therapy and hypnosis for the treatment of bulimia nervosa. . . . . *Marcia Degun-Mather*

### Anorexia Nervosa

Introduction. . . . . *Barry J. Evans*

The nature and aetiology of anorexia nervosa . . . . . *Nola Rushford*

Management of anorexia nervosa. . . . . *Nola Rushford*

Hypnotic and strategic interventions in the treatment of anorexia nervosa . . . *Michael D. Yapko*

Hypnotherapy in the treatment of anorexia tardive. . . . . *Elizabeth H. Georgiou*

## CLINICAL HANDBOOKS AND ANTHOLOGIES ORDER FORM

No. of copies \_\_\_\_\_

**HYPNOSIS IN AUSTRALIA**

PRICE: \$45.00 (ASH MEMBERS) \$50.00 (OTHERS)

**HYPNOSIS FOR WEIGHT MANAGEMENT AND EATING DISORDERS**

PRICE: \$35.00 (ASH MEMBERS) \$40.00 (OTHERS)

**HYPNOSIS AND THE LAW: PRINCIPLES AND PRACTICE**

PRICE: \$35.00

- Please add postage charges as follows: single copy \$10.00, two copies \$12.00, three or more copies \$15.00
- Cheques and bank drafts should be made payable to the Australian Journal of Clinical and Experimental Hypnosis
- To pay by credit card, complete the following:

Mastercard

Visa

Credit Card Numbers

Name \_\_\_\_\_

Address \_\_\_\_\_

Expiry date \_\_\_\_\_ Signature \_\_\_\_\_

**Return order form to:**

Australian Journal of Clinical and Experimental Hypnosis  
PO Box 592  
Heidelberg, Victoria 3084, Australia

**FAX:** +61 3 9496 4564

## INFORMATION FOR AUTHORS

1. Contributions should conform to the style outlined in the *Publication Manual of the American Psychological Association* (3rd ed.; 1983), except that spelling should conform to *The Macquarie Dictionary*. Page references in the following notes are to the *Publication Manual*. The attention of authors is especially drawn to changes in the third edition (p. 13).
2. Manuscripts (pp. 136-143), not usually to exceed 4500 words, should be typed clearly on quarto (21 x 26 cm or 22 x 28 cm) paper, double-spaced throughout and with margins of at least 4 cm on all four sides. Three copies are required. Duplicated or photocopied copies are acceptable if they closely resemble typed copies.
3. Title page (pp. 143-144) for the manuscript should show the title of the article, the name(s) and affiliation(s) of the authors, a running head and, at the bottom of the page, the name and address (including postal code) of the person to whom proofs and reprint requests should be sent.
4. An abstract (pp. 23-24) should follow the title page. The abstract of a report of an empirical study is 100-150 words; the abstract of a review or theoretical paper is 75-100 words.
5. Abbreviations (pp. 63-64) should be kept to a minimum.
6. Metric units (pp. 75-79) are used in accordance with the International System of Units (SI), with no full stops when abbreviated.
7. Tables (pp. 83-93) should be typed on separate sheets with rules (if any) in light pencil only. Please indicate approximate location in the text.
8. Figures (pp. 94-104) should be presented as glossy photographic prints or as black-ink drawings on Bristol board, similar white card, or good quality tracing paper. Diagrams and lettering must have a professional finish and be about twice the final size required. On the back of each figure there should appear in light pencil the name(s) of the author(s), the article title, the figure number and caption, without the front of the figure being defaced. Indicate approximate location in the text. The two copies of figures may be photocopies.
9. References (pp. 107-133) are given at the end of the text. All references cited in the text must appear in the reference list.
10. A copy of the MS must be kept by the author for proofreading purposes.

### Reprints

Because of increasing costs, reprints of articles will not be provided to authors free of charge. Authors may order reprints in multiples of 25 copies at the time of returning proofs. Cost, for each batch of 25 reprints, is \$A2.00 per page rounded up to the next even number of pages. Payment for reprints must be made at the time of ordering.

### Copyright

In view of the increasing complexities of copyright law, copyright of material published in the *Australian Journal of Clinical and Experimental Hypnosis* rests with the Australian Society of Hypnosis, Limited. Authors are at liberty to publish their own papers in books of which they are the author or the editor, and may reproduce their papers for their own use.

ISSN 0156-0417

PRINT POST APPROVED PP 737010/00005