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Editorial

Ericksonian Hypnosis

In this issue, while there is a range of topics, we feature articles relating to Milton H. Erickson, Ericksonian hypnosis, and NLP. This year marks the 18th anniversary of the death of Milton Erikson. Having undertaken many training courses in Ericksonian hypnosis and NLP, I was particularly impressed with one story I had heard about Milton Erickson's skills. If you are a parent, then you will appreciate my interest. It related to Erickson at a railway station who (with her permission of course) assisted an overwhelmed mother of several children. After he raised his finger above the "prayer point" of the nearest child (about 6–8 inches above bridge of nose and above middle of forehead, so eyes converge on that point) and then lowering it, the child immediately fell asleep. Erickson did this with each of the remaining children, moving along the row. I have not been able to replicate this effect, but tried an adaptation, utilising the reverse direction (low to high) and the auditory rather than visual channel, in getting my son up in the morning. I used a beeping sound, starting with a very low pitch, and raised this along a scale until it was two octaves higher. It was like a movie about raising the dead: He slowly raised himself up off the bed from a supine position to feet on the floor, awake but baffled as to why he was awake. I was truly impressed.

Guest Editor May 2009 Edition

Dr Graham Jamieson, long-time researcher in hypnosis from the University of New England, has agreed to be the Guest Editor for the next edition of the *AJCEH*. That edition will be concentrating on research about hypnosis, with the normal mix of case studies, scripts, and reviews.

In This Edition

Jeffrey Zeig and James Auld speak about their journeys with Milton Erickson in different ways: Jeffrey from the perspective of his role as a teacher, more so than his role as the director of The Milton H. Erickson Foundation of Phoenix, Arizona; and James from his personal journey and metamorphosis through the world of Erickson's work and disciples.

Carlos Alvarado walks us through an amazing review of bibliographies about mesmerism and there is no doubt that Erickson was a master at mesmerising

people. As several researchers have been working on hypnosis correlates and susceptibility to optical illusions, we have included a report on the first study here by Gow and her colleagues on the association between orientation-contingent aftereffects and dissociation and fantasy proneness. The results of this and a second study have been presented at ASH congresses and the results of the third study will be presented at the 2008 Norfolk ASH Congress.

Keith Dawes digs deep into the unconscious and, true to the style of Milton Erickson and the broad disciplinary approach in NLP, investigates making the explicit tacit and hints at the possibility that hypnosis might facilitate this knowledge exchange.

Michael Gathercole demonstrates how hypnosis was used to treat hypnagogic hallucinations in two young men and Eugen Hlywa looks back at two amazing experiences in his long journey with the use of hypnosis in clinical practice and reminds us that amazing things do happen.

Short scripts have been included by Kathleen M. Connolly on general relaxation and by Tracey Lang on stopping smoking, on self-hypnosis and on letting go of stress. The first of the book reviews focuses on another of George Burns' books on healing stories—a fitting way to end an edition on Ericksonian hypnosis, because where would we be without stories to guide us?

Included in the edition are the abstracts for the Scientific Program from the ASH 2008 Congress and an index for *AJCEH*, 2001–2008.

Kathryn M. Gow

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An Ericksonian Approach to Hypnosis: The Phenomenological Model of Hypnosis; the Nature of Hypnotic "States"; Multilevel Communication and Indirection; and why all Hypnosis is not Self-Hypnosis

Jeffrey K. Zeig
The Milton H. Erickson Foundation, Phoenix, Arizona

From a phenomenological perspective, hypnosis can be deconstructed into five component subsets in three categories: intrapsychic, interpersonal, and contextual. The five subsets are: altering attention; modifying intensity; fostering dissociation; eliciting responses; and defining the situation as hypnosis. Each subset is explained and illustrated herein. The synergistic combination of some, or all, of the five sets elicits in the patient the experience of hypnosis. In this position paper, the nature of "states" is explained, as is the purpose of multilevel communication and indirection. Also addressed are the distinctions among hypnosis, self-hypnosis and related "states" including meditation, active imagination, autogenic training, mindfulness, and relaxation.

My training in hypnosis began in 1971 and was guided by extraordinary experts and mentors, including Milton Erickson. Over the years I have been exposed to many theories about the nature of hypnosis, both from those who taught me and in the literature. Having matured as a clinician, it is time to consolidate my clinical knowledge and present my perspective on the nature of hypnosis with the hope that it can add to existing principles and contribute to the future of practice. I will start from the beginning.

In my early years I remember teachers stating with conviction, "All hypnosis is self-hypnosis." Acupuncture had just made its entrance onto the American stage and some mentors were staunch in their view that acupuncture was merely hypnosis. I accepted their pronouncements as fact. After all, they were propounded by learned men and women, and I had little notion about the nature of hypnosis.

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In those years experts grouped themselves into camps. There were state theorists and non-state theorists, and each position was bolstered by research findings. T. X. Barber (1969), one of the principal non-state theorists, put "hypnosis" in quotation marks as a way of indicating its non-state nature. Additionally, he was one of the first to point out that the very act of defining the context as hypnosis was an essential aspect of its character**.**

The nature of hypnosis as a state has not been a subject of a lot of serious debate in the recent literature, and it is not my intention to revive the debate. Rather, by examining hypnosis from the perspective of its phenomenology, we can advance practice and theory. We can, moreover, elucidate the nature of hypnosis as distinct from self-hypnosis and place self-hypnosis in context with related phenomena including meditation.

Because I am going to offer a phenomenological perspective, I will begin by defining phenomenology.

PHENOMENOLOGY

Phenomenology, the study of lived experience, is a lens that can be used to further a subjective understanding of lived moments. Science is a separate lens. When it comes to human events such as hypnosis or any other "state," our understandings depend on the lens we use to examine them.

We can use the lens of phenomenology to understand "states" and their deconsfuction.

DECONSTRUCTION

Deconstruction results when one examines one's phenomenology. The "state" that is being experienced can be subdivided into component parts. Distinctions are made so that the components can be examined and understood. One deconstructs to understand the essential nature of lived experience.

Science is similar. A scientist might deconstruct a life form into cells and their components in order to determine an essential aspect of its mechanics. In this paper I deconstruct hypnosis into five component sets in three categories: intrapsychic, interpersonal, and contextual. Together, they constitute the essentials of the hypnotic "state."

"STATES"

The term "state" in my usage is a generic reference to any human experience characterised by coherence, intent, structure, and duration. "State" is a meta-

category that includes positive and negative emotions, as well as processes such as interest, curiosity, awareness, evaluation, attention, perception, and even patterns of movement. The term "state" is a kind of shorthand. A "state" is a construct of convenience that allows one to summarise a series of phenomenal events into a whole so that those events can be understood and communicated.

It is a thesis of this paper that Barber put the wrong concept in quotation marks. It would be more accurate to put "states" in quotation marks, not because they do not exist, but because any individual "state" is not a singularity and cannot be considered as such. Labelling a phenomenon as a "state" helps people categorise, understand, and relate to others their own experience. Thinking of a "state" as a singularity leads to fuzzy thinking because states are complex and unstable. "States" change moment to moment and situation to situation. "States" are not easily subject to scientific evaluation. They are constructs of subjective and interpersonal convenience. And so is it with hypnosis.

Hypnosis is a construct of convenience, just as is love or indifference, or curiosity or interest. And, it is not a singularity. Bertrand Russell defined electricity as "not so much a thing, as a way that things happen"(1925/2001). Similarly, hypnosis is not a thing, but it is a way that things happen in a social context.

Hypnosis would best be considered a syndrome, in the same way that Meniere's is a syndrome; in the same way that fibromyalgia is a syndrome. Depression, too, is a syndrome, although most consider it a disease.

In practice, one commonly refers to syndromes as singularities, for example, "I have Meniere's," "I have depression." Such labelling has decided advantages, one of which is convenience. However, labelling may also obscure subsequent action. If one states categorically that one suffers depression, the options for change seem limited to medical interventions. Labels can constrict or open options. Labelling an experience as hypnosis makes it seem as if it is a singularity, which it is not.

Hypnosis is a way that a complex, but definable, phenomenology is affected in relationships over time. It is a way that social exchange and responsiveness happen. Because it shifts over time, it should not be thought of as a singularity. Hypnosis is similar to love and depression, each of which is a complex of definable phenomenologies affected in relationships that alter over time.

To better explain what I mean, I will use hypnosis as a model, and explain what I do when I conduct an hypnotic induction. It should be noted that I

use numerous structures and methods to elicit trance effects, but in order to stay on topic I am streamlining this part of the discussion.

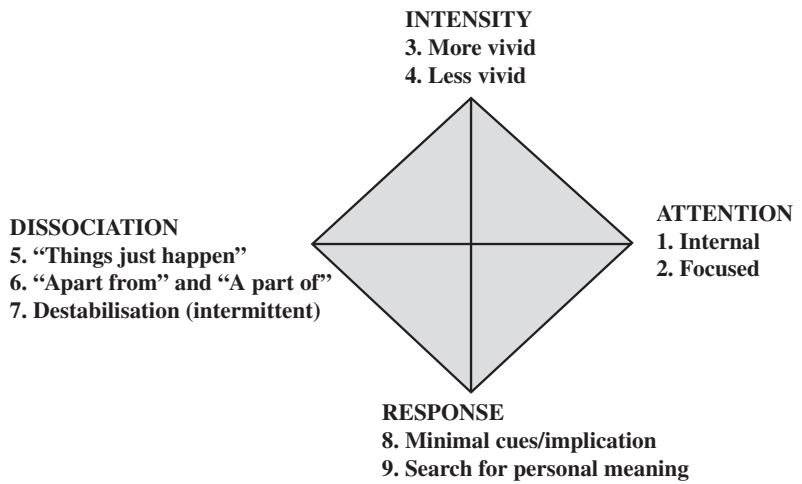
THE INDUCTION OF HYPNOSIS

When I start to elicit trance, I imagine a diamond-shaped figure surrounding my patient. The diamond represents facets of the responses I am inviting from the patient. It also is my model of hypnosis from a phenomenological perspective.

For the sake of explanation, I will present the model as if it were a baseball diamond. Of course, in baseball one runs the bases sequentially, which is not the case in my inductions, but I will explain it in this way to clarify the fundamental points.

Figure 1 illustrates the diamond. Later, I will present hypothetical examples of induction language used to facilitate each of the five response sets in order to further the understanding of each aspect of the model. There are five response sets that make up the phenomenological model of hypnosis: altering attention; modifying intensity; fostering dissociation; eliciting responses; and defining the situation as hypnosis. Using the baseball metaphor, the first four serve as bases, and the fifth is the playing field.

Figure 1: The Phenomenology of Hypnosis



The following is a hypothetical illustration of induction patter, starting with guiding attention and proceeding around the diamond. The phenomenological rationale of induction language will be explained as we go.

GUIDING ATTENTION

One could consider first base, *guiding attention*.

Let's take as an induction technique, which might be considered a semi-traditional (Weitzenhoffer, 1989) imagery induction of walking on a beach. During the description certain elements can be highlighted for the subject to intentionally elicit changes in attention. We will pick up the hypothetical induction shortly after eye closure.

You can imagine walking down a beautiful beach.

Perhaps you can sit comfortably on the sand and take a moment with your eyes closed to reflect on the sights you have just seen so that you can see the blue/green colour of the sea, the birds flying overhead, the sails of the ships fluttering in the wind, and realise which of them interests you more so that you can further experience the fine details …

Maybe you are remembering inside the sound of the calls of the birds that you just heard; the sounds of children playing; the rolling sounds of the surf; and the fine details that now you can realise …

You could be taking time to just go inside … and feel the way your body can realise the warmth in the air, and how fine it can feel to realise it.

And, you can really enjoy the way in which you can especially intently enjoy one of those experiences and let it occupy a central place right now in a fine way …

Consider the intent of this patter: It is meant to elicit a change in attention, primarily in which the subject will do two things—focus and attend internally.

Consider also the method. It is similar to what a dramatist would do. The dramatist subtly shapes responses; he does not tell the reader what to think or feel. The dramatist puts "props" on the reader's "stage" and invites the reader to play with those props to realise an emotional tone. This is what I do as a hypnotist: I put "toys" on the patient's emotional stage and invite the patient to play with them with the intent that, by doing so, the patient will label his experience as trance. Another relevant metaphor is that the hypnosis creates "scaffolding" that quickly falls away, but stays in place long enough for the patient to establish a foundational experience. One common component of the lived experience of trance is a change in attention.

What is the reason for orienting patients to change their attention? It has to do with the way in which some individuals experience hypnosis. For some people, merely attending internally is enough for them to say, "I'm in a trance." Others may report trance when they visually focus intently on something internal or external. Still others report trance when they focus intently on an internal sensation or image.

Orienting the subject to focus internally allows the willing patient to access that aspect of phenomenology. Note that the patient is not being directed to alter attention per se, but being invited. Inviting rather than directing is central to an Ericksonian perspective. The rationale behind this approach will be explained in the section on dissociation.

One important aspect of trance is to offer the patient an opportunity to change attentional processes. Focusing attention internally is only one method. There are situations in which it is the wrong strategy, but it would diverge too far from the mission of this paper to explain that in detail. Suffice it to say that there are situations in which, for example, it is more therapeutically valuable to elicit a diffuse external attention in order for the patient to label his experience, "I am in a trance."

Some individuals require other phenomenological experiences to say, "I am in a trance," including changing the intensity of their experience.

ELICITING CHANGES IN INTENSITY

Let's consider second base, *eliciting changes in intensity.* To illustrate, we can continue our hypothetical induction ...

a*nd as you find a fine central place for your focus, there are other experiences that can become so pleasantly apparent …*

For example, you might want to experience yourself now as if you are lying in the sand on the beach so that you can really feel the pleasant, comfortable warmth of the sand; so that you can really feel how nice it is to let your body just rest back into the pressure of the support behind you; so that you can really let yourself settle comfortably into the support … of the sand … behind you now and feel the comfort of the support in the back of your head, the back of your spine, the back of your legs … and how the moments seem to linger … because as you do that you do not have to be aware of the noises around you; you can notice how the sounds of the waves have vanished; how the sensations of support quickly fade into the background … so you can vividly experience the comfort that is really yours …

The intent of this patter is to elicit changes in intensity by which the intensity of experience becomes more or less vivid. Sensations can become more or less vivid; images can become more or less vivid; the passage of time can become more or less vivid, and so forth.

As far as the method is concerned, again note that the patient is not being directed to alter intensity per se; the patient is being invited.

The purpose of eliciting changes in intensity is that some people report trance when they experience changes in intensity. One person might say, "I know I am in a hypnotic trance because I am deeply relaxed." Another might say, "I know I am in trance because images are more vivid." For still another, it is memories that become more vivid.

Some report trance when experiences become less vivid. They know that they are in trance when the passage of time is less vivid, when sensations fade, when they do not experience their body, etc.

Some only report trance when they experience changes both in attention and intensity. Others only require changes in one aspect of those two sets.

Then there are individuals who require different phenomenological experiences to say, "I am in a trance," including the experience of dissociation.

DISSOCIATION

We are calling third base, *dissociation*. To illustrate, we can again continue our hypothetical induction ...

And there are so many interesting ways to experience comfort. Your body can experience the comfort of resting in the sand, while your mind can suddenly remember vivid experiences of comfort from so long ago … and for a moment it can suddenly seem as if those memories come alive, because as you can remember certain experiences, you can experience certain memories …

And you have a conscious mind and an unconscious mind. And your conscious mind can be attending to the tone of my voice while your unconscious mind can be attending to the tone of comforting voices from long ago, because it is so nice to experience things both consciously and unconsciously …

And your body can explore present comfort while your mind can understand or your mind can explore comfort while your body presently can understand …

And all along you can feel yourself go … glow … grow … go more comfortably inside …

The intent of this unusual patter is to foster dissociation. Dissociation is defined as one or a combination of three events: one, the sense that something

"just happens"; two, being both "part of, and apart from"; and three, a sense of destabilisation. Each will be explained in turn.

Dissociation is experienced when something "just happens." Patients report trance when there are sudden changes in behaviour, as occurs for example with an arm levitation in which the arm seems to move independently. The dissociative phenomena of "just happening" can be mental rather than physical. The patient can suddenly realise that images just happen, memories just happen, that the passage of time is different, and so on.

Dissociation is experienced when a person feels herself to be "part of and apart from" immediate experience. A hypnotised person can experience herself as in trance explaining, "I was here, but I was *there* … " Hypnotised patients commonly say that they know they were in trance because they had a dual sense of feeling as if they are in another time or place, but also present. The more that the person dissociates, the less the person attends to the present and the more the archaic involvement.

Dissociation is experienced to a lesser extent when there is a sense of destabilisation. Destabilisation often is a precursor to dissociation. Erickson maintained that confusion is a part of all hypnosis, whether or not the clinician realises it. In his later years, Erickson "seasoned" his inductions with minor confusion methods as a way of destabilising the conscious set and eliciting the hypnotic set. The use of mini-confusion methods also dramatically raised tension, which was lowered by the subsequent concrete suggestion. For example, when offering an induction in which he revivified forgotten memories by describing learning the letters of the alphabet, Erickson might have said, "Did you dot the 't' and cross the 'i'?" The purpose of the method was to promote momentary destabilisation, which could subjectively be experienced as a discontinuity in the flow of experience and minor dissociation.

DISSOCIATION AND INDIRECT TECHNIQUES

The technique of fostering dissociation requires explanation. In the earlier example, I use three notable techniques: dissociation statements, double dissociation statements, and misspeaking. These methods have been described by other investigators, including Erickson, Rossi, and Rossi (1976) and Lankton and Lankton (1969). I will not elaborate on those techniques here, but it is important to note that eliciting dissociation requires a different technique than altering attention or modifying intensity.

One can use direct suggestions to alter attention or modify intensity. For example, in a traditional hypnotic induction, a hypnotist can pronounce to a patient, "Close your eyes. Go inside. Focus on relaxing your body. Take deep breaths until your relaxation becomes more profound."

But one cannot use direct methods to elicit dissociation, because the nature of dissociation is essentially different from altering attention or modifying intensity, both of which can be done volitionally. Dissociation is one of many human experiences that must be experienced avolitionally.

There are some human "states" in which dissociation is a basic component. Spontaneity is one of them. So is laughter. One cannot direct oneself to laugh unless one is a trained actor. Laughter has to "just happen."

To create a sense of avolition, a clinician must use methods that set a background for the patient to "spontaneously" access the dissociative experience. The clinician orients the patient toward a dissocative experience by using methods including dissociation statements, double dissociation statements, and destabilising methods such as misspeaking. These methods are commonly classified as indirect. Orienting-toward (indirect) methods must be applied when a clinician wants to elicit dissociative phenomena or any phenomenon that has avolition as an essential part of its phenomenological complex. There are many orienting-toward methods that I use in eliciting trance. Some have been characterised in the literature; others have not. Suffice it to say that orienting-toward methods are integral to eliciting avolitional experience.

In a chapter that I wrote on hypnotic amnesia (Zeig, 1985), I explained the special need for using indirect suggestions for creating amnesia and any hypnotic phenomena based on deleting experience, including negative hallucinations. One sets the background for amnesia to "just happen" by using indirect methods because that method will promote amnesia more readily. There are few subjects who can experience amnesia on command through direct suggestion.

Some hypnotic phenomena require more dissociative skill than others, including amnesia, negative hallucinations and anaesthesia, but all hypnotic phenomena, when deconstructed, are based to some extent in dissociation. To promote hypnotic phenomena, indirect methods have an important role if the goal of the clinician is to simultaneously set the stage for dissociation.

When offering an induction, a clinician cannot say, "Make relaxation just happen. Make yourself feel as if you are here and not here at the same time.

Be slightly disoriented and destabilised." To say such things would be tantamount to saying, "Be spontaneous." Rather, the clinician sets a background (creates a momentary scaffolding) for dissociation to be experienced.

Dissociation is not just a phenomenological component of hypnosis. Dissociation is a basic component of psychological symptoms, which by their very nature have to "just happen." A patient could complain that her phobia just happens; her habit problem just happens; her hallucinations just happen. The severity of the problem is often determined by the intensity of the dissociation. The more dissociation, the more troublesome the problem, and the more recalcitrant it is to treatment.

There is a hypnotic parallel to the phenomena of intensity of dissociation. The more dissociation the patient exhibits, the more hypnotic phenomena the patient can achieve, because all hypnotic phenomena are based in dissociation. Those who achieve more hypnotic phenomena are deemed better hypnotic subjects, and experience themselves as such.

Curiously, dissociation is a platform from which many human experiences, both adaptive and maladaptive, are generated. Dissociation in hypnosis is good; dissociation in a symptom is bad. Many human experiences are based in dissociation. The automaticity of dissociation is a biological trait. One cannot be conscious of all activity. Automaticity increases efficiency, and is salutary in the vast majority of cases. In the case of symptoms, however, automaticity is part of the problem.

The automaticity generated in hypnosis as dissociative phenomena can be subtly therapeutic. Hypnotic dissociation is benign and can lead to more pleasant "states." If a hypnotised person can have pleasant dissociation in trance, that experience may be built on therapeutically as a steppingstone to countering the negative dissociation inherent in symptoms.

Hence, it is incumbent on practitioners of hypnosis to foster dissociation throughout the induction and therapy. Encouraging more dissociative experience often will lead patients to classify their experience as a hypnotic "state." Perhaps the clinician will be able to find a way to use the elicited constructive, hypnotic dissociation to counter the symptomatic dissociation. Because there are many useful aspects of dissociation for both induction and therapy, hypnotists will do well to have methods for eliciting dissociative experience. Further, dissociative experience can be elicited while promoting other aspects of hypnosis, including using it in tandem with the operations of altering attention, modifying intensity, eliciting responses, and even defining the situation as hypnosis.

Return to the sections of hypothetical induction examples for both altering attention and modifying intensity. Note that the respective goal sets are suggested more indirectly than directly. Indirect methods orient toward the goal set, and in doing so simultaneously subtly encourage dissociative behaviour. Indirect methods are inherently destabilising because the patient needs to interpret the intent of the message, which carries varying degrees of ambiguity and contains more that one level of message.

Examined structurally, when using indirection, the hypnotist is speaking on multiple levels, perhaps simultaneously addressing multiple changes in phenomenology. Alterations in attention, modifications in intensity, and dissociation can happen at the same time. The social effect of multilevel communications on the recipient of the induction is that it can destabilise the habitual conscious set, paving the way for emergence of the hypnotic set. The patient, who is often behaviourally passive, activates to interpret the message from the hypnotist.

Hence, we can understand Erickson's use of multilevel communication as a method that, among other things, elicits the hypnotic set of dissociation within the patient. In this case multilevel communication fosters destabilisation. Destabilisation is a simple form of dissociation and opens the door for more complex dissociative behaviour. A phenomenological perspective also sheds light on the use of so-called indirect methods.

There have been many interesting investigations of indirect suggestions, but science cannot adequately investigate the complexities of lived experience, which we refer to as phenomenology. Scientific inquiries do not take into account the underlying strategic, phenomenological purpose for which indirect suggestions are constructed in the warp and woof of induction. Indirect communications orient toward goal phenomenology and simultaneously elicit destabilising, dissociative responses. Using the method of "orienting toward," while targeting alterations in intensity and modifications in intensity, allows those two phenomena to "just happen" in a dissociative/automatic manner, instead of merely being responses to a direct command. Responses to a direct command, for example, suggestions to attend internally, could be deemed "hypnotic," but if they just happen automatically, they are certainly more hypnotic.

Indirect suggestions are integral to hypnosis because they are vehicles for changing mood and perspective. Indirect suggestions are not singularities to be investigated. Rather, indirect suggestions are the way that things happen when inducing trance. In using indirect suggestions, the hypnotic communication

takes on characteristics of poetry in that it is geared, like poetry, to eliciting phenomenological changes in mood and perspective.

Consider theatre arts. The purpose of theatre, film, literature and poetry is to change mood and perspective. For example, Shakespeare offers us Sonnet 30:

> When to the sessions of sweet silent thought
> I summon up remembrance of things past,
> I sigh the lack of many a thing I sought,
> And with old woes new wail my dear time's waste;
> Then can I drown an eye, unused to flow,
> For precious friends hid in death's dateless night,
> And weep afresh love's long-since-cancell'd woe,
> And moan the expense of many a vanish'd sight;
> Then can I grieve at grievances foregone,
> And heavily from woe to woe tell o'er
> The sad account of fore-bemoanèd moan,
> Which I new pay as if not paid before.
> But if the while I think on thee, dear friend,
> All losses are restored and sorrows end.

Consider the themes in the poem. They are couched in a rhythmic language of unusual syntax, which creates a destabilising effect. The language is indirect. The purpose of Shakespeare's method is to orient the reader to change his mood and perspective. Destabilising and indirect methods are required to elicit phenomenological effects. If Shakespeare merely presented the theme directly, the poem would have little impact; in fact, the poetry would fall away.

In the same way, if a hypnotic message is presented directly, there is no hypnosis. The syntax and grammar, and, as we will see, the response and the context, determine the set that is elicited.

Erickson's inductions were multilevel and indirect because he was orienting his patients to achieve a change in set, a change in mood and perspective. He was setting up conditions for a patient to experience alterations in phenomenology combining subsets of altering attention, modifying intensity, fostering dissociation, changing response patterns, and defining the context as hypnosis. It is my hypothesis that Erickson's model comes more from literature than science. He was very well read. He understood what dramatists do to alter mood and perspective, and he built on their models.

Although dissociation has a central place in hypnotic phenomenology, a percentage of people require another phenomenological experience to say, "I am in a trance," namely, a change in responsiveness. Note that the previous three categories were intrapsychic. The next category is interpersonal. When we add the interpersonal set, we will be able to differentiate hypnosis from self-hypnosis and related "states."

RESPONSIVENESS

Continuing the baseball metaphor, one can consider home plate as a change in *responsiveness.* This is home base in an essential way. When the patient develops the two responsiveness characteristics that I will outline, the induction period ends and the utilisation of therapeutic trance can begin.

We continue our hypothetical induction...

And as you go comfortably inside, you don't have to concentrate on the way in which you suddenly … take a deeeep breath … *so you can notice that the moment that you* … exhale fully … *is a moment of most profound physiological rest. And I don't know if you can realise all the ways that you* … head forward … *into trance, but you can now enjoy realising the movements that best create trance comfort* …

And the sense of return can be interesting. There can be the return to sitting on the sand … reflecting … remembering the comfort … and how easy it is … and how you can memorise it by an action no more complex that your ability to … take a deep breath … *and remember that you can bring back this comfort quickly and easily in such a way that it can be at home with you … at work … inside you … and realised in relationship … to the capacity of your unconscious mind to guide you …*

Yes, these iterations may seem strange, but I hope that they seem strange in the way that poetry is strange. It is the experienced meaning of the message, not the content of the message, that elicits the response. The implications and covert injunctions are scaffolding that carry the target inside them.

The intent of this induction patter is to elicit two types of response, a response to minimal cues, which are the implications of the communication, and an intense search for personal meaning.

A patient could respond to the couched messages (minimal cues) of taking a deep breath, exhaling fully, or moving her head forward. On surface reflection it might seem strange to promote such responses, but consider the target of social psychology. That field investigates how individuals respond to covert aspects of social communication, how individuals respond to attributions,

demand characteristics, authority, and priming. In many ways Erickson was the consummate social psychologist, investigating how people respond without fully realising the cues that prompted the response.

There is a three-step pattern to induction: Say "A," mean "B," to get response "C." The hypnotist might talk about walking on the beach ("A"), but mean ("B") "I am talking about trance" in order to get a response to minimal cues ("C"). Once the person responds to minimal cues, the induction is over and therapy begins.

We can simplify a model of therapy. In the ensuing therapy, the therapist says, "X," means, "Y," in order to get response, "Z." For example, the therapist might offer a therapeutic metaphor that could parallel the patient's problem and contain ideas that effect real-life solutions.

Why does the hypnotist believe that the patient will respond to the therapeutic metaphor? The answer is because the patient responded to minimal cues in the induction. The induction, among other things, paves the way for the patient to respond to implication. The induction opens the responsiveness to the injunctive layer of communication. In his practice, Erickson commonly did not tell therapeutic stories until he saw that there was an earlier response to the induction, which sometimes was a formal induction and sometimes was a "naturalistic," informal induction.

The second aspect of responsiveness is to promote a search for personal meaning. In the induction, the words and images may be vague and ambiguous. The purpose is to stimulate responses from the patient that are personally meaningful. The hypnotist uses generalities; the patient supplies the specifics. The induction is like a Rorschach or an abstract painting; the projections of the patient create meaning.

Promoting responsiveness is an interpersonal tactic. It makes the hypnotic experience into a two-party event a dialogue. Hypnosis happens in an interpersonal field, which distinguishes it from related states.

In some ways, the concept of self-hypnosis is a misnomer because it is not the same entity as hypnosis as I have defined it. Self-hypnosis is more similar to active imagination, meditation, relaxation, mindfulness, and biofeedback states, none of which rely on interpersonal responsiveness—a characteristic that I am requiring as a central definition of hypnosis.

Self-hypnosis and related states have overlapping phenomenologies; they depend to varying degrees on alterations in attention, modifications in intensity and dissociative/destabilising activities. For example, meditation can be effected by focusing on a mantra. Active imagination can lead to images

"just happening." Relaxation training adds new intensity to immediate experience. But none of these related states is conducted in an interpersonal field in which implication is central. The context of each "state" changes the experience in essential ways. How one defines the situation changes the way that it is experienced.

DEFINING THE SITUATION AS HYPNOSIS

Continuing the baseball metaphor, one can consider defining the situation as hypnosis as the playing field, the context in which the action happens. It is important to define the situation as hypnosis because the contextual definition of any situation determines how it will be understood. For example, take the phrase, "Here is a table." If that statement is made by a carpenter, it will be understood differently than when it is made by a chef.

Contexts can be defined directly or indirectly. In most situations the contextual markers that add meaning are implicit. But contextual markers can be made explicit, which is commonly the case in traditional hypnosis.

One can directly define the situation as hypnosis by calling it as such. The traditional hypnotist can initiate the experience by telling the patient that it is time to begin hypnosis.

Erickson sometimes initiated trance directly. At other times, he initiated trance indirectly by covertly orienting the patient to the idea that the time for trance was present. Erickson might suggest that trance was about to begin by shifting his voice to a softer tone; changing the direction of his speech, for example, by talking to the floor rather than directly to the person; and/or by changing the cadence of his voice to a "hypnotic" metre.

Why define the situation indirectly? Because it provides another opportunity to promote destabilisation and dissociation through multilevel communication. In addition, such methods further activate the patient to respond to minimal cues and search for personal meaning.

WHEN DOES HYPNOSIS HAPPEN?

The effect of experiencing the phenomenological components of trance is synergistic. The component sets comprise a system, and the systemic complexity of hypnosis cannot be fully understood by examining each element in isolation. Similarly, in biology, a cell cannot be understood by examining its component parts, and life cannot be understood by examining the function of groups of cells. Still, there are things to learn when one examines individual

elements. Thus, speaking in general terms, when a person defines the situation as hypnosis overtly or covertly, alters attention, modifies intensity, experiences dissociation, and responds to implication, that person will say, "I am in a trance." Yet it is true that some individuals who experience only a set of the components will report trance. Each of the phenomenological sets that contributes to the whole of hypnosis, moreover, changes over the course of time, and changes as the emphasis of the clinician changes. Hence, hypnosis as a singularity does not exist. Hypnosis is not a thing; it is a way in which things happen.

CONCLUSIONS

A phenomenological perspective on hypnosis has been offered that is derived from clinical experience. Using the lens of phenomenological deconstruction, hypnosis can be viewed as consisting of contextual, intrapsychic, and interpersonal components. An individual reports hypnosis as happening when there is the experience of one or a combination of five sets: altering attention; modifying intensity; fostering dissociation; eliciting responses; and defining the situation as hypnosis. Implication and multilevel communication are integral to eliciting five sets. Implication and multilevel communication are integral to hypnosis; they are the way that hypnosis happens. The five sets constitute the essentials of hypnosis, which can be considered a "state," just as curiosity or love or anger can be considered "states." Hypnosis can be differentiated from self-hypnosis, meditation, mindfulness and related states because hypnosis is based on the interpersonal aspect of responding to implication, and that component is absent or greatly minimised in those other states.

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MESMERISM ONLINE: A BIBLIOGRAPHIC REVIEW

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There are many books and articles of historical interest about mesmerism in the digital library Google Book Search. Some of them are mentioned under the following headings: histories and overviews, phenomena, medical applications, critiques, explanatory concepts, anti-materialistic views, and miscellaneous materials including topics such as work with special subjects, the relationship of mesmerism and phrenology, and bibliographies. Some of the authors represented in the digital library are Alexander Bertrand, James Braid, J. P. F. Deleuze, Albert de Rochas, J. Dupotet de Sennevoy, John Elliotson, James Esdaile, Joseph W. Haddock, E. F. Henin de Cuvillers, Justinus Kerner, C. A. F. Kluge, Charles Lafontaine, and Franz Anton Mesmer. The collection includes issues of the following periodicals: Archives du Magnétisme Animal, Magikon, Le Magnétiseur, The Phreno-Magnet and Mirror of Nature, *and* Zoist.

With the development of digital libraries the availability of historical books and articles has considerably increased. One example is the online library Google Book Search (http://books.google.com), which has been discussed in the past in terms of dissociation (Alvarado, 2008) and other phenomena (Alvarado, 2007). In this bibliographical note, I would like to focus on some of the holdings of the collection about mesmerism published during the nineteenth century. My purpose is not to discuss the material in detail, but to offer brief comments so as to bring a variety of books and articles to the attention of readers interested in the history of the subject.

HISTORIES AND OVERVIEWS

A good general overview of the early history of mesmerism was provided by science populariser Louis Figuier (1819–94) in the third volume of his

I wish to thank Andreas Sommer for his assistance in translating German book titles.
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Histoire du merveilleux dans temps modernes (Figuier, 1860). The volume's 17 chapters were dedicated to the topic, with the last two focusing on hypnosis. The general focus of Figuier was France, and the first 10 chapters were about Franz Anton Mesmer (1734–1815) and the reception of his work.

The collection also includes several books that combine historical information with discussions of the practice and theory of mesmerism. One of them is the first volume of *Histoire crititique du magnétisme animal* (Deleuze, 1813). In the book Joseph Philippe François Deleuze (1753–1835) started with Mesmer, and went on to discuss aspects such as the magnetic fluid, healing, problems and dangers of mesmerism, and personally observed phenomena. Other useful overviews in the collection are *Animal Magnetism: Its History to the Present Time* (1841), *Du magnétisme animal en France* (Bertrand, 1826), *An History of Magic, Witchcraft, and Animal Magnetism* (Colquhoun, 1851), *Isis Revelata: An Inquiry into the Origin, Progress and Present State of Animal Magnetism* (Colquhoun, 1836), *Mesmer et le magnétisme animal* (Bersot, 1864), *Versuch einer Darstellung des animalischen Magnetismus als Heilmittel* (Kluge, 1815), and several other works (e.g., Binet & Féré, 1887/1894; Leger, 1846; Teste, 1840/1843).

German physician and poet Justinus Kerner (1786–1862) discussed Mesmer in his *Franz Anton Mesmer aus Schwaben, Entdecker des thierischen Magnetismus* (Kerner, 1856). The collection also has one of Mesmer's (1814) books, *Mesmerismus oder System der Wechselwirkungen, Theorie und Anwendung des thierischen Magnetismus*.

There is much information about early magnetism in the United States in the account that Charles Poyen (1837) presented in his *Progress of Animal Magnetism in New England*. He wrote: "At the time when the writer commenced lecturing in New England, he found the subject almost universally unknown … Nineteen months have elapsed since that period; and already Animal Magnetism has sprung, from a complete state of obscurity and neglect, into general notice, and become the object of a lively interest throughout the country" (p. 35).

Many authors presented overviews of different aspects of the mesmeric movement (e.g., Buckland, 1850; Deleuze, 1825/1850; Dupotet de Sennevoy, 1838; Esdaile, 1852; Gregory, 1884; Lee, 1866; Lowe, 1822; Teste, 1840/1843). One of them was Italian Francesco Guidi, who wrote in his *Trattato Teorico-Pratico di Magnetismo Animale*: "Magnetism … cannot be well defined: it is an unexplained protean; now visible, now invisible" (Guidi, 1854, p. 2; this, and other translations, are mine).

The collection also has many article reviews on the topic (e.g., "Animalischer

Magnetismus," 1823; "Animal Magnetism," 1838; Eve, 1845; Herfner, 1844; Knight, 1867, pp. 584–588; "Magnetismo Animal ó Mesmerismo," 1842; "Mesmerism," 1843; Ripley & Dana, 1858, pp. 593–598). The author of a paper entitled "Quelques Reflexions sur le Magnétisme Animal" called for research and speculated on the role of imagination to explain mesmeric phenomena (Le Boyer, 1823).

PHENOMENA

The travelling magnetiser Charles Lafontaine (1803–1892) referred to physiological and psychological effects of magnetism in his book *L'art de magnétiser ou le magnétisme animal* (Lafontaine, 1847/1852). The first were such effects as the closing of the eyes, perspiration, spasms, convulsive tremors, partial or complete insensibility or paralysis, catalepsy, somnolence, attraction, trance, and induction of trance at a distance. The second were thought-transmission, sight with closed eyes and through matter, and ecstasy.

Commenting about magnetic sleep Poyen (1837) stated: "Those who have been put into the magnetic sleep in this country, belong to both sexes, and they are persons of almost every age. The writer of these pages had himself alone the opportunity of observing twenty-eight" (p. 59). Others discussed the memory of the magnetised somnambules. Alphonse Teste (1840/1843) wrote in his book *A Practical Manual of Animal Magnetism*: "From the beginning, most somnambulists recollect with astonishing precision all the events which have occurred to them; sometimes, too, from so long a date back, that they had absolutely lost the recollection of them during the state of being awake" (pp. 58–59). British physician William Gregory (1803–1858) wrote about the same topic: "As a general rule … the sleeper does not remember, after waking, what he may have seen, felt, tasted, smelled, heard, spoken, or done during his sleep; but when next put to sleep, he recollects perfectly all that has occurred, not only in the last sleep, but in all former sleeps, and, as in the ordinary state, with greater or less accuracy, although usually very accurately indeed" (Gregory, 1884, p. 5).

There is an interesting report of observations of insensibility to induced pain observed at the Asylum for the Deaf and Dumb of Philadelphia. One of the descriptions about phenomena obtained with a 16-year-old boy reads as follows:

> When the boy was asleep, several of the party were asked to pinch his flesh as hard as they thought proper, to see whether he would awake; but, though some pressed

> their nails so as to imbed them in his flesh, he never moved a muscle. A pin was then thrust through his flesh, making a complete hole in it; but to this he was as insensible as to all the rest. (Buckingham, 1841, pp. 387–391)

French physician Alexandre Bertrand (1795–1831) wrote that some of his somnambules said they could see "the fluid coming out of my fingers" (Bertrand, 1826, p. ix), a phenomenon he attributed to the imagination. Some mesmerised subjects said they "could see an aura, or fluid, passing into, along, and out of the magnet" (Haddock, 1851, p. 168). The collection also has the classic work of Carl Ludwig Reichenbach (1788–1869) on sensitives claiming to see lights around magnets, crystals and minerals, *Physico-Physiological Researches on the Dynamics of Magnetism, Electricity, Heat, Light, Crystallization, and Chemism, in their Relation to Vital Force* (Reichenbach, 1849/1851). While Reichenbach did not mesmerise his subjects, his writings were quoted by many mesmerists (e.g., Ashburner, 1867, pp. 36, 83). Later publications in the collection were about luminous emanations from magnets conducted using magnetic procedures, an example being the paper "Mémoire relatif a certaines radiations perçues par les sensitifs" (De Rochas, 1891).

There were also accounts of clairvoyance (Barth, 1849; Elliotson, 1849). Other authors discussed phenomena such as the production of a variety of effects on mesmerised individuals through silent suggestions (Adams, 1849; Ashburner, 1847).

British physician Joseph Haddock (1800–1861) reported observations of the spiritualistic type with his subject Emma. As he wrote in *Somnolism & Psycheism*: "Frequently during the spring and summer of 1848, Emma would, in the mesmeric state, speak of the scenery and nature of the spirit-world" (Haddock, 1851, p. 181). Similar mediumistic phenomena were discussed in detail by Louis Alphonse Cahagnet (1809–1885) in *The Celestial Telegraph* (Cahagnet, 1848–1854/1851).

The digital library has discussions of phenomena representing the late nineteenth-century neo-mesmeric movement. A well-known representative of this trend was French Colonel Albert de Rochas (1837–1914). In his book *L'extériorisation de la sensibilité* he stated that "the human body … emitts effluvia likely to act on the senses of certain persons" (De Rochas, 1895, p. 47). In this book, he also discussed the "exteriorisation of sensibility," a phenomenon in which, in magnetised subjects, "the sense of touch, instead of being excerted, as ordinarily, on the surface of the skin, is extended outside of the body" (p. 50). Other publications in the collection that were part of

French neo-mesmerism include *Les courants de la polarité dans l'aimant et dans le corps humain* (Chazarain & Dècle, 1887) and *Traité expérimental de magnétisme* (Durville, 1895–1896).

MEDICAL APPPLICATIONS

Many authors focused on the medical applications of mesmerism. This included discussions about the control of pain during procedures such as amputations and the removal of tumors (Elliotson, 1843, 1846), and dental operations (Purland, 1859). The author of *The Mighty Curative Powers of Mesmerism* presented cases cured by mesmeric procedures in chapters about rheumatism, neuralgia, toothache, sprains, paralysis, headaches, noises in the head, epilepsy, St Vitus's Dance, inflammations, affections of the eyes, loss of voice, throat and chest complaints, affections of the heart, affections of the stomach, emaciation and debility in children (Capern, 1851).

Physician James Esdaile (1808–1859), reported on his medical use of mesmerism in several publications (Esdaile, 1846a, 1846b, 1852). He concluded in his *Mesmerism in India*:

> That in the mesmeric trance the most severe and protracted surgical operations can be performed, without the patients being sensible of pain.
>
> That spasms and nervous pains often disappear before the mesmeric trance.
>
> That it gives us a complete command of the muscular system, and is therefore of great service in restoring contracted limbs.
>
> That the chronic administration of Mesmerism often acts as a useful stimulant in functional debility of the nerves. (Esdaile, 1846b, p. 271)

Several cases of claimed cures were published in the *Zoist,* an English journal devoted to mesmerism some of which volumes are in the collection. Some of the articles were: "Cure of a Large Polypus of the Uterus" (Ashburner, 1851), "Cure of Long-Standing Intense Pains and Other Sufferings and Extreme Debility, with Mesmerism, after the Failure of Endless and Distressing Measures" (Elliotson, 1847), "Cure of Deafness" (Evans, 1849), and "Cures of Severe Female Chronic Ailments, with Mesmerism" (Hands, 1846).

CRITIQUES

La Verdad Católica, a Catholic magazine published in Cuba, had an anonymous article about animal magnetism as seen by the Church. According to the writer, "the Church, a watching sentinel in matters of faith and customs, has expressly

prohibited the consultations made to somnambulism" (O., 1861, p. 111).

The author of an overview of mesmerism published in 1844 in the *Dublin University Magazine* stated that: "Mesmerism … cannot with any propriety be said to have as yet attained to the rank of a science. Its procedure is not sure: there is something in it still of a shooting-at-random, predictive of an appearance of caprice or inconstancy in the results" (Herfner, 1844, p. 49). Another author was even more negative. In his view, belief in mesmerism was a "stupid delusion" and "the science is a humbug; its practitioners knaves, and its believers dupes" (Reese, 1838, p. 62).

In an editorial in the British medical journal *Lancet*, possibly written by the well-known critic of mesmerism Thomas Wakley (1795–1862), it was stated that mesmerism's "arrogant pretensions and gross falsehoods have often been detected and exposed" ("Mesmeric Humbug and Quackery," 1851, p. 155).

Defenders of the animal magnetic movement, such as Elliotson (1843) and Sandby (1848), discussed the opposition of many to the claims of mesmerism, much of which came from physicians. English writer, abolitionist and women's rights defender Harriet Martineau (1802–1876) wrote in her *Letters on Mesmerism* about the scepticism of physicians:

> The systematic disingenuousness of some Medical Journals on this subject, and the far-fetched calumnies and offensive assumptions with which it is the regular practice of a large number of the Faculty to assail every case of cure or relief by Mesmerism, looked very much as if they were in conflict with powerful truth, and as if they knew it. (Martineau, 1845, pp. vi–vii)

Similarly, a writer in *Mechanic's Magazine, Museum, Register, Journal, and Gazette* stated: "In a subject confessedly so little understood as the physiology of the nerves, the very men who at one moment confess their almost total ignorance of its laws, are found the next obstinately refusing to examine with their own eyes and ears the new phenomena" (H., 1849, p. 150).

There were, or course, many defences of mesmerism. Two examples from France were *Défense du magnétisme animal contre les attaques don't il est l'objet dans le Dictionnaire des Sciences Médicales* (Deleuze, 1819) and *Le magnétisme animal devant les savants, devant le raisonnement, devant les faits* (Rabache, 1854).

Many of the critiques were expressed in the form of defences of theoretical explanations other than the magnetic fluid. Examples of these discussions in the collection appear in the next section.

EXPLANATORY CONCEPTS

Most mesmerists emphasised the physical nature of the magnetic fluid. James Esdaile (1852) discussed the concept in his *Natural and Mesmeric Clairvoyance*: "Man … in an abnormal state … like the electric fish … can … project his nervous fluid … by his will, beyond the surface of his body, and in the direction desired" (p. 234). Deleuze stated: "The magnetiser can communicate his fluid to many objects, and these objects become either the conductors of his action, or proper instruments of its transmission, and produce magnetic effects upon persons with whom he is in communication" (Deleuze, 1825/1850, p. 212). Lafontaine (1847/1852) commented on the "vital or nervous fluid that is essentially necessary to life, which can be communicated to another body to produce the phenomena known by the name of *animal magnetism*" (p. 17). This principle, Lafontaine believed, was affected by the will of the magnetist. It was projected from the magnetiser's nervous system to the system of the persons being influenced, where it produced different effects.

The concept of a fluid, wrote an anonymous author, seemed too convenient to account for phenomena whose nature are unknown. The idea was considered to be "repugnant to common sense" ("Magnetismo Animal ó Mesmerismo," 1842, p. 130). Others presented alternative explanations to the concept of a magnetic force. Etienne Félix Henin de Cuvillers (1755–1841) believed that this force was not real, but the product of the imagination. The magnetisers, he asserted in *Le magnétisme animal retrouvé dans l'antiquité*, proposed the concept of animal magnetism "gratuitously, and on their own authority" (Henin de Cuvillers, 1821, p. 134). In another publication, Henin de Cuvillers (1820) argued that animal magnetism as a force did not produce magnetic sleep, "it is the fixed gaze of the magnetiser that fatigues and puts to sleep the person … ; this is added to gestures and *passes*, which often frighten, or at least cause a vivid emotion … Up to now it is not necessary to suppose an emission of a material fluid" (p. 76).

English physicians Thomas Laycock (1812–1876) and William B. Carpenter (1813–1885) also discussed the subject. The first felt that mesmerism was an example of ideas becoming a reality in the mind of the mesmerised (Laycock, 1857, p. 136), while the second referred to the influence of susceptibility and belief (Carpenter, 1877, p. 26).

Perhaps the most influential of the nineteenth-century conventional theorists was Scottish physician James Braid (1795–1860). He wrote in his classic book *Neurypnology*:

> The phenomena of mesmerism were to be accounted for on the principle of a derangement of the state of the cerebro-spinal centres, and of the circulatory, and respiratory, and muscular systems, induced … by a fixed stare, absolute repose of body, fixed attention, and suppressed respiration, concomitant with that fixity of attention … arising from the causes referred to, and not at all on the volition, or passes of the operator, throwing out a magnetic fluid, or exciting into activity some mystical universal fluid or medium. (Braid, 1843, pp. 19–20)

In a later work, Braid (1852) referred to the possibility that, in some individuals involved in experiments of electro-biology, the ideas and suggestions from others could "even in the waking condition … change physical action, and produce the expected results" (p. 2). Furthermore, such observations showed that, "through the influence of suggestion, existing predominant ideas may be removed" (p. 42).

There are several other examples in this digital library of authors sceptical about animal magnetism as a physical agent (e.g., Estlin, 1843; Eve, 1845; Madden, 1857). A late critique came from English physician Ernest Hart (1836–1898), who wrote in his book *Hypnotism, Mesmerism, and the New Witchcraft*:

> I may say … that the conditions induced … may be shown to be due to a nervous condition or mental state arising in the individual subject either from physical or mental excitation; and further that such conditions … are not and never were due to any healing power or to any fluid or magnetic influence or mesmeric or hypnotic power resident in the operator. (Hart 1896, p. 34)

Of course, not all magnetisers agreed with the "imagination" explanation. As stated by one of them:

> The influence of the imagination and of the imitative principle seem, at first sight, much more capable of affording an adequate explanation of the facts; but the activity of these principles in the magnetic process is rejected as absurd by every practical magnetiser, as well as by every intelligent opponent of the system; and, besides, many of the phenomena are of such a nature, that they cannot be rationally accounted for upon any such theory. (Colquhoun, 1833, p. 91)

ANTI-MATERIALISTIC VIEWS

In *An History of Magic, Wichcraft, and Animal Magnetism*, Colquhoun (1851) argued for the religious implication of animal magnetism. In his view:

> Animal Magnetism … is eminently calculated to confirm our christian faith, and to increase our rational devotion towards the great Creator and Preserver of all things; for there is no subject of philosophical inquiry which has a more direct tendency to elevate our thoughts to the contemplation of our present endowments and ultimate destiny—to increase our admiration of the power, and wisdom, and beneficence of the Supreme Being, in the creation and government of the universe, and to prepare us for the enjoyment of another, a better, and a more spiritual state of existence. (Vol. 2, pp. 299–300)

Colquhoun (1836) argued further in another work that animal magnetism refuted materialistic ideas. This was the case because its phenomena presented evidence for the soul's existence. These phenomena were "capable of exercising its various functions … without the assistance or co-operation of any of those material organs, by means of which it usually maintains a correspondence with the external world" (Vol. 2, p. 166).

Writers, such as Haddock (1851) and Ashburner (1867), also related animal magnetism to ideas of the soul. The same may be said about the German physician Johann Heinrich Jung-Stilling (1740–1817), as discussed in his *Theory of Pneumatology* (Jung-Stilling, 1808/1851). French magnetiser Jules Dupotet de Sennevoy (1796–1881) presented animal magnetism as a doctrine capable of elevating man closer to God, as seen in his *Essai sur l'ensegnement philosophique du magnétisme* (Dupotet de Sennevoy, 1845). In addition to the above mentioned authors, others in the collection have argued against materialism based on mesmeric phenomena (Chardel, 1826; Wienholt, 1805/1845).

MISCELLANEOUS MATERIAL

Some publications in the collection present studies or observations of particular individuals. This was the case of *The Seeress of Prevorst* (Kerner, 1829/1845), in which were recorded many observations of Friedericke Hauffe (1801–1829). Suffering from a variety of problems, the "physician prescribed magnetic passes and medicines; but she fell into the magnetic sleep, and prescribed for herself" (p. 45). There are also writings about other magnetic somnambules, such as Ellen Dawson (Barth, 1849), Bruno Binet (Cahagnet, 1848–1854/1850), Alexis Didier (Elliotson, 1849), Emma (Haddock, 1851), Cynthia Ann Gleason (Poyen, 1837), and Loraina Brackett (Stone, 1837).

The interaction of mesmerism and phrenology was commented on by several writers—a topic called phreno-magnetism. As described by a commentator, phrenology postulated that "the brain contains or consists of

a great number of distinct organs, each destined to be the seat of particular moral feelings and separate mental operations," while in phreno-magnetism "it is conceived that it is possible to magnetise particular cerebral organs, to call forth the evidence of the operation of particular moral qualities, or to excite the action of certain intellectual faculties" (Review of the books *Human Magnetism* and *Letters on Mesmerism*, 1845, p. 223). One observer mesmerised a subject and wrote: "On my touching the region of *Tune*, she broke forth in a strain of melody as sweet as it was loud and clear; and gave a few equally striking indications of the functions of other faculties" (Hall, 1845, p. 8). Other relevant observations in the collection appear in *The Phreno-Magnet and Mirror of Nature*, edited by Spencer T. Hall (1812–1885) ("Private Experiments in Phreno-Magnetism," 1843; Sunderland, 1843).

Several reviews of books can be found in the collection (e.g., Review of the book *Animal Magnetism and Homeopathy*, 1838; Review of the book *Facts in Mesmerism,* 1841; Review of the book *Illustrations of Modern Mesmerism*, 1846; Review of the book *Mesmerism and Its Opponents*, 1844; Review of the book *Mesmerism in India*, 1847). These are particularly useful when assessing the reception of ideas about mesmerism.

The collection also has a few bibliographies useful for research. German surgeon C. A. F. Kluge (1782–1844) discussed mesmeric literature in a long essay (Kluge, 1815, pp. 16–210). Other works listed many useful titles (*The Bibliography of Progressive Literature*, 1899, pp. 32–35; De Ploucquet, 1809, pp. 2–4; Grässe, 1843, pp. 43–46; Pauly, 1872, pp. 787–799; Rand, 1905, pp. 1059–1067).

Finally, the digital library has issues of relevant specialised journals such as *Archives du Magnétisme Animal*, *Magikon*, *Le Magnétiseur*, *The Phreno-Magnet* and *Mirror of Nature*, and *Zoist*.

CONCLUSION

These are but a few examples of the contents of Google Book Search about mesmerism. I have attempted to present in this essay both well-known works, and less-known and generally neglected writings. The latter include articles from magazines and medical journals. While I have not covered all possible references or topics in the collection, the resources of this digital library are of great value for the historical study of mesmerism. Readers are encouraged to use the library's search engine to find additional materials, many of which are to be found in non-mesmeric literature such as medical and general-interest periodicals.

In addition, the collection contains many papers and books on other topics. There are numerous materials about hypnosis, and much that is relevant to the histories of psychology, psychiatry, general medicine, and many other disciplines.

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Association Between Susceptibility to Orientation-Contingent Colour Aftereffects, and Fantasy Proneness and Dissociation

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Milton Erickson was interested in a vast range of phenomena. He and his wife studied McCollough effects by inducing them in subjects via hypnosis. This article has been included to mark the depth and breadth of his (their) thinking. It describes an experiment conducted at a university where students were shown a series of coloured slides, which were alternated with vertical or horizontal gratings. While the actual colours cannot be shown on the paper copy here, we have given links to the websites where you too can test yourself on these visual phenomena. Erickson and Erickson's (1938) findings regarding hypnotised people's ability to see appropriate illusory colours involved hypnotising the subject first and then checking for orientation-contingent colour aftereffects (O-C CAEs). This study is different in that the subjects (students) were not hypnotised at any time during the testing session, but some of them were enrolled in an introductory hypnosis (theory) class and may have been more hypnotisable than the other students. We were interested in the relationships between the variables and the subjects' propensity to experience these illusions.

Colour aftereffects have become well known since they were discovered and subsequently named after McCollough in 1965. McCollough effects (MEs)

This is a report on the results of the first study undertaken at the Queensland University of Technology. The findings of a series of studies have been presented at the congresses of the Australian Society of Hypnosis, with the results of the most recent study being presented at the 2008 Congress.

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can be contingent on orientation, spatial frequency, movement and colour (Humphrey, 1998). Orientation-contingent colour aftereffects (O-C CAEs) occur when orthogonally alternated gratings are presented in association with alternating complementary colours, such as red and green. Typically a subject views an alternating presentation of horizontal gratings paired with a bright green hue and vertical gratings paired with a bright red hue (see the Appendix for examples of the different horizontal and vertical gratings in black and white). The orientation of these gratings can be alternated.

These presentations are repeated a sufficient number of times to ensure the induction of the ME. The presentation of achromatic test stimuli manifests the CAEs (see web page http://en.wikipedia.org/wiki/McCollough_effect). The participants typically view these as being coloured, with the illusory colours appearing to be of a complementary nature to those presented during the induction phase. Following on from the above example, the achromatic horizontal contours would appear to be tinted with a faint red hue, and the vertical contours with a faint green hue. Repetition of the above process should result in continually increasing strength of the illusory colours (McCollough, 1965).

Orientation-Contingent Colour Aftereffects

O-C CAEs were originally discovered following the recognition that these effects were contingent on the direction of a subject's gaze towards a stimulus (Humphrey, 1998). There have been a number of other characteristics that have been identified as differentiating this CAE from those contingent on other properties. Firstly, McCollough (1965) reported that the range of orientation tuning impacts on the success of inducing O-C CAEs. She reported that O-C CAEs would not generalise to the achromatic test stimuli when participants rotated their heads 45 degrees from their normal position. The angular separation of the gratings used in the induction period has also been demonstrated as impacting on the strength of the O-C CAEs (Fidell, 1970). This author reported that O-C CAEs would cancel each other if the gratings were less than 22 degrees in angular separation, whereas gratings that are 45 degrees will induce CAEs that are as strong as those induced by gratings that are 90 degrees in angular separations. A third characteristic of O-C CAEs is their robustness, as they have been shown to persist for hours. In fact Humphrey reported that some researchers have demonstrated their durability over weeks and months.

Explanations of Orientation-Contingent Colour Aftereffects

A number of explanations accounting for O-C CAEs are based on the characteristics outlined above. The predominant explanations focus on low-level neural mechanisms. McCollough (1965) reported that O-C CAEs are the result of colour adaptations of visual system neurons that code the local orientation of bars and edges. She proposes that these neurons are suppressed during the induction of the ME and that the resulting illusory colours will persist until they are no longer suppressed. This proposal has been strongly supported; however, a number of researchers have since strengthened this explanation. In fact, Siegel, Allan, and Eissenberg (1992) argue that most non-associative explanations are simply extensions of McCollough's (1965) hypothesis. Humphrey (1998) proposed that there are units within the visual system that have broadly tuned bandwidths for wavelength and narrowly tuned bandwidths for orientation. A variation of this explanation proposed that there were narrowly tuned bandwidths for both wavelength and orientation. For both of these explanations, the induction of CAEs results in the fatigue of these units, which causes a perceptual bias towards the complementary hue.

The above physiological explanations have remained dominant in the literature as a result of researchers consistently demonstrating that CAEs occur because of changes in the lower level of the visual pathway. However, some properties of O-C CAEs are not accounted for in these explanations, which have led to the proposal of a number of alternative explanations. First, it has been recognised that the long-term durability of CAEs is not accounted for by the physiological explanations. These effects have been shown to last for weeks and it seems unlikely that this could be achieved by single cells in the visual system. Second, CAEs characteristically display some level of decay. The rate at which this decay occurs is dependent on the conditions of induction, which also seems unlikely to be within the capabilities of the single cells. Finally, these effects are contingent upon a number of different properties, which suggests that there would need to be a large number of detectors in the visual system. Thus, it does not seem likely that the single cells in the visual system could account for these characteristics, which demonstrates the need for alternative explanations.

Alternative explanations have been proposed to account for those properties that are not suggestive of classical conditioning. Dodwell and Humphrey (1990) agreed that CAEs are a result of changes in the adaptation level of the visual system. However, they also acknowledged that this explanation

does not account for the contingencies of CAEs on other stimulus features. They proposed an adaptation level theory where changes are controlled by error-correcting devices (ECDs). These devices are sensitive to contingencies in the external environment and are violated during the induction of CAEs. That is, the presentation of a vertical grating paired with a red hue causes the neutral point to shift as a result of the overrepresentation of this colour with the verticals. This results in the perception of an illusory colour. These authors claim that their theory is not associative; however, Siegel et al. (1992) have argued that participants learn a relationship between the orientation and hue during induction. Despite this difference of opinions, this theory provides a role for MEs in perception. That is, the maintenance of correspondence between the external environment and its internal representation. This explanation also demonstrates that the reason CAEs build up and dissipate slowly is a result of the neutral point moving slowly up and down the continuum.

"Common Factor" Hypothesis

The above explanations largely focus on the importance of normal visual acuity and colour vision to explain individual differences in ME responses. However, these factors do not account for other differences that are widely recognised in susceptibility to O-C CAEs. These differences have also been recognised in susceptibility to hypnotic phenomena, which has led some to propose that a common factor may exist that accounts for these differences. Tinker (1938) investigated the "common factor" hypothesis by investigating susceptibility to geometric optical illusions. These illusions included the Muller-Lyer, vertical-horizontal and Poggendorf. The results of this research indicated that the responses to the first two illusions were correlated; however, the third was not. Thus, Tinker concluded that this supports the proposal of a common factor, as this may account for these findings.

Susceptibility to hypnotic phenomena has been reported as being normally distributed across the population (Whalen & Nash, 1996). In an attempt to explore the "common factor" hypothesis, Erickson and Erickson (1938) induced MEs using hypnosis. These authors attempted to determine whether those participants that were highly hypnotisable were also highly susceptible to illusory colours. Although only a small sample was used, four out of the five participants tested were able to hallucinate the colours specified by the experimenter. These participants were also able to identify appropriately the white sheet of paper presented to them as the appropriate illusory colour.

These findings further support the proposal that there may be a common factor, as this may account for the high susceptibility of these participants to both types of the phenomena used in this study.

Very little research has been conducted since 1938 to explore this proposal. However, Broerse and Crassini (1980) researched this by investigating the possibility that imagery ability might account for individual differences in susceptibility to O-C CAEs. These researchers explored this by asking participants to imagine colours on physically present bars, or bars on physically present colours. They hypothesised that those participants who had a higher ability to imagine these properties would be more susceptible to O-C CAEs than those that had difficulty with this task. The results of this research failed to identify any significant correlations between these two factors. However, these findings led to the proposal that research may need to focus on factors related to suggestibility, rather than on abilities such as imagery. Significant research was undertaken by Wallace and colleagues from 1974 to 1994 which linked hypnotic susceptibility to susceptibility to visual illusions (Wallace, 1979, 1988, 1990; Wallace, Allen, & Weber, 1994; Wallace, Garrett, & Anstadt, 1974; Wallace, Knight, & Garrett, 1976; Wallace & Patterson, 1984).

Later, Atkinson (1994) also explored this relationship, and found that susceptibility to hypnosis and to optical illusions were positively related. That author also reported that this relationship was stronger with orientation or motion illusions. Thus, these reports appear to suggest that there is a common factor that accounts for individual differences in responses to these phenomena. This study originally proposed to examine this by specifically testing susceptibility of participants to both of these phenomena; however, it was determined that this was outside the ethical guidelines for students who were not trained in hypnosis. Thus, it was proposed that a viable alternative would be to examine personality traits that over time have been considered to be correlated with hypnotisability.

Correlates of Susceptibility to Hypnotic Phenomena

Extensive research was conducted throughout the 1950s to 1970s to identify correlates of susceptibility to hypnotic phenomena (Wilson & Barber, 1983a). Unfortunately, much of this research failed to identify many significant relationships. However, later research identified several factors that influence a person's performance in the hypnotic situation, including suggestibility, dissociation, imagination, absorption, and fantasy proneness (Frankel, 1994).

Two of these factors, fantasy proneness and dissociation, have been demonstrated as being highly correlated with hypnotisability (Gow, Lane, & Chant, 2003; Gow, Lang, & Chant, 2004; Gow & Pybus, 2005; Wilson & Barber, 1983a). Dissociation has been defined by Zamansky and Bartis (1984) as engaging in two or more simultaneously occurring cognitive processes concurrently, with one process occurring below the level of conscious awareness. These authors investigated the relationship between dissociation and susceptibility to hypnotic phenomena. The results indicated that those participants who were rated as highly susceptible to hypnotic phenomena were able to complete the dissociation task to a higher level than those participants rated as only moderate to low hypnotisable. These findings demonstrate the relationship between these two factors, which is consistent with Hilgard's (1992) neo-dissociation theory. This theory proposed that hypnotic and dissociative experiences are characterised by similar factors, including intense absorption, amnesia, fantasy proneness, automatism, depersonalisation, and cognitive inconsistencies.

However, it is important to note that despite the similarities of these factors, they seem to occur independently of each other. In order to strengthen the hypothesis of the study presented here, it was proposed that a second factor needed to be examined. As mentioned above, the correlation between hypnotisability and fantasy proneness has previously been demonstrated. Thus, it was decided that fantasy proneness would be examined as the second factor.

Fantasy proneness was discovered during an interview study, which was conducted by Wilson and Barber (1983a), during which some participants reported frequent, intensive fantasising throughout their daily lives. The reports of these participants led the researchers to propose that they possessed a "fantasy prone" personality. To further explore this personality, Lynn and Rhue (1986) conducted a study examining the relationship between fantasy proneness and susceptibility to hypnotic phenomena. The results of this study indicated that 80% of these participants were both highly fantasy prone and susceptible to hypnotic phenomena. These findings suggested that these factors were highly correlated.

In order to confirm their results, the authors replicated the study making only a few minor methodological adjustments (Lynn & Rhue, 1989). The results of their study were not as convincing as those of the first. The results indicated that moderate to highly fantasy prone participants were more susceptible to hypnotic phenomena than low fantasy prone participants. These findings still indicated a correlation between fantasy proneness and susceptibility to hypnotic phenomena, and are consistent with the proposal that fantasy prone

participants will have a higher likelihood of being susceptible to hypnotic phenomena as it is closely related to their daily lives (Wilson & Barber, 1983). Thus this current study sought to explore the influence of this personality trait and dissociation on susceptibility to O-C CAEs.

A third factor, preferred sensory modality, was also examined in this study. It was hypothesised that a person who prefers to process their information visually would experience stronger CAEs than those who process their information using another sensory modality. This proposal is consistent with the information-processing model (Coren & Girgus, 1978), which proposed that the stimulus is transmitted to the appropriate modality where the transmission is compared with the original and a response is produced. According to this model, a person who usually processes their information visually should produce responses that result in stronger CAEs. Therefore it was conjectured that those participants who prefer to process their information using another modality should produce weaker effects.

By using the three variables of fantasy proneness, dissociation, and preferred sensory modality, the current study further explored the "common factor" hypothesis. It was predicted that there would be an association between susceptibility to O-C CAEs and these variables.

METHOD

Design

This research was a successive independent samples design, as two different samples of individuals were tested on separate occasions. The researchers did not manipulate an independent variable, as this was a correlational study. However, they examined the three variables, fantasy proneness, dissociation, and preferred information processing modality to determine whether they might enable the prediction of another variable, susceptibility to O-C CAEs.

Participants

Two groups of participants were employed for the present study. The first group consisted of 15 participants enrolled in an Introduction to Theory and Research in Hypnosis unit at the Queensland University of Technology (QUT). The second group consisted of 47 students enrolled in first-year courses at QUT. There were 54 females and eight males in the overall group. The ages of the participants ranged between 17 and 76 years, with 80% of

the group falling below the age of 30. Hypnosis unit participants completed this study as a requirement of the subject, and first-year students received two hours course credit. The participants were given chocolates as an incentive to participate. All participants were naive to the purpose of the experiment. All had normal or corrected-to-normal visual acuity, which was tested using the British Optical Company eye chart. Colour vision was also assessed using the Ishihara Test for Colour Blindness (plates 1, 2, 6, 12, and 23).

Procedure

Participants were required to complete a demographic data sheet consisting of questions regarding age, gender, education and other demographic details. The ME experiment was then conducted, and the following questionnaires were later completed: DESII, ICMI, and the Representational Systems Questionnaire (adapted version). A psychologist, trained in hypnosis, administered these questionnaires. The demographic data sheet, visual acuity, and colour vision tests were conducted first. Following this was the O-C CAE experiment, which was conducted early in the session to reduce the level of fatigue in the participants. The DESII, ICMI, and Representational Systems Questionnaire (revised version) were then administered.

We were aware that there might be some effect on the scores of the tests administered after the actual experiment, but considered that conducted in the opposite manner, then that too might have influenced their responses to the O-C CAE experiment, especially in relation to the students in the hypnosis class. The testing of this group was undertaken in a different room from the first group, however it was assumed that this would not affect the dynamics of the experiment as each room had the same layout.

Instruments

Dissociative Experiences Scale Two (DESII) The DESII (Carlson & Putnam, 1993) is a brief self-report measure of the frequency of dissociative experiences. This measure consists of 28 questions on which participants are asked to record the frequency of various dissociative experiences. They indicate the percentage of time these experiences occur by circling a number between 0 and 100, which consists of 10% intervals. Bernstein and Putnam (1986) reported a test-retest reliability coefficient of .84 for this measure. These authors also reported construct validity for the DESII, which has been demonstrated by studies examining the DESII scores for different diagnostic groups.

Inventory of Childhood Memories and Imaginings (ICMI) The ICMI (Wilson & Barber, 1983b) is a 52-item self-report measure designed to assess the characteristics associated with fantasy proneness. Responses are either true or false. Total scores for this measure are calculated by adding the total number of true responses. Participants scoring 37 or above are classed as highly fantasy prone; 11 to 36 moderately fantasy prone; and below 10 as low fantasy prone (Lynn & Rhue, 1986). A reliability coefficient of .89 was reported for this measure, establishing it as a reliable measure of fantasy proneness (Lynn & Rhue, 1986). Other research has also demonstrated this scale's validity, with Silva and Kirsch (1992) reporting significant correlations with other scales measuring imaginative ability.

Adaptation of the Representational Systems Questionnaire A new inventory, which had not been validated previously, called the Representational Systems Questionnaire (Lonergan, Morlet, and Durkan, pers. comm.) was adapted for the current study. A panel of experts from QUT developed the revised version. The questionnaire consists of six questions assessing the preferred sensory modality of the participants. The modalities tested include kinaesthetic, visual, and auditory. There are three responses in each question, and participants must rank their preferences for each of these. The first preference for each question is coded according to the appropriate modality, and participants are given a score for each modality. The modality with the highest score is deemed to be the subject's preferred sensory modality. Unfortunately, reliability and validity information could not be provided, as this version had not been used previously.

Experiment Inducing and Testing O-C CAEs

The induction and test stimuli used in this experiment were projected onto a white screen using the computer systems in the experimental rooms. The stimuli were designed using the Microsoft PowerPoint Program, which were an average distance of 6.5 m from the participants. The stimuli for the demonstration phase consisted of a large circular display (spatial frequency: 12.071 cycles/deg of visual angle). Within this display was a smaller concentric circle (spatial frequency: 6.059 cycles/deg of visual angle). A distinct black border separated the inner and outer concentric circles (width: 15 mm of visual angle). These stimuli were presented in association with a green or magenta hue (induction) or as achromatic (test). There were two series in the demonstration phase, and the duration of these stimuli presentations was controlled manually.

The stimuli in the pre-induction and induction phases consisted of square-wave grating stimuli. The size of the stimuli was the same as those in the demonstration phase. However, they were either horizontal or vertical. The induction stimuli had the same orientation for both the inner and outer circles and were presented in association with either a green or magenta hue (e.g., R-V, R-H, G-V, G-H). The pairings of the hue and gratings remained constant for the first four induction phases, and were reversed for the last four phases (e.g., R-V, G-H, G-V, R-H). To reduce practice effects, the presentation of the slides was always in the reversed order of the preceding series (e.g., R-V, G-H, G-H, R-V). Alternatively, the achromatic test stimuli consisted of orthogonally oriented centre and surround gratings. There were four series of the pre-induction phase and eight of the induction phases. The duration of the stimuli presentation was controlled by the Microsoft Power Point Program to ensure accuracy and consistency across trials.

For the first group, each induction slide was shown for 8 seconds with a 2 second interval between each slide. There was a 30 second interval between the last induction slide and the first test slide, during which participants viewed a black screen. For the second group, the times were altered to reduce the level of fatigue that was witnessed in the first group of participants. The presentation times of the induction stimuli remained the same; however, the 30 second interval between the induction and test stimuli was reduced to 15 seconds. Also, the pre-induction phase was eliminated for the second group, as it was deemed to be unnecessary.

The response sheets for the first group consisted of diagrams in which arrows pointed to the concentric circles with the numbers from 0 to 10, and letters R and G (representing red and green, respectively) being presented beside them. They were required to circle a letter, and then circle a number indicating the strength of the illusory colour. To reduce confusion, this was changed for the second group. This response sheet also consisted of concentric circles. However, only one response was required for each part of the circle. Participants were presented with a number line that stretched from 10 to 0 to 10, on which they circled the strength of the illusory colour, with the left side representing green and the right side representing red.

RESULTS

The responses for all aspects of the experiment were collated using the Microsoft Excel Program. The SPSS Program was used to analyse the data.

Personality Traits

A Pearson product-moment correlation coefficient was calculated on the scores from the DESII and ICMI for groups one and two. This revealed a significant correlation [r (57) =.58, $p < .01$] for the scores of these two scales. As suspected, mean rankings also indicated that the hypnosis unit participants were significantly ($p < .01$) more likely to be highly fantasy prone and dissociative than the first-year participants (see Table 1).

Table 1: Mean Rankings of Responses to DESII and ICMI

Mean rank	ICMI	DESII
Hypnosis unit participants	39.17	42.92
First year participants	25.59	24.57

Note: $N = 62$.

Analysis revealed that the between-subjects factors, fantasy proneness, and dissociation did not have a significant effect on responses to the O-C CAE experiment. Analyses indicated that preferred sensory modality was not a significant variable.

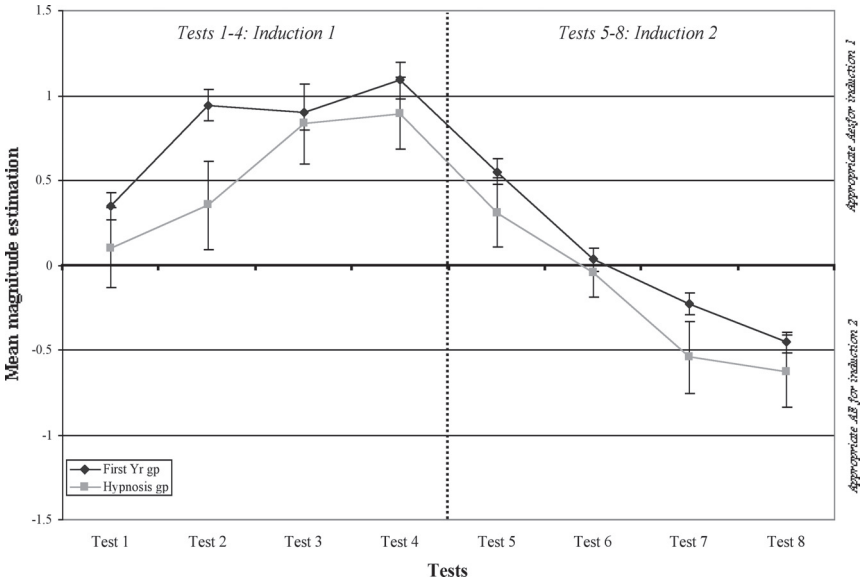
Visual Acuity

Visual acuity, as assessed by the British Optical Company eye chart, was tested as a between-subjects factor. This analysis revealed that those participants who had normal or corrected-to-normal visual acuity, which was defined as having less than two errors, reported significantly "better" CAEs than those participants who had two or more errors [r (57,5) = 10.611, $p < .01$].

Orientation-Contingent Colour Aftereffects

The responses to the O-C CAE experiment were scored for direction (red or green) and strength (0 to 10). The responses of the two groups were coded as positive if they were opposite or complementary to the colours viewed in the first four induction series. Univariate outliers across the data were examined using the SPSS Explore procedure, which resulted in six participants being excluded from subsequent data analysis. These participants had extreme scores for magnitude estimation, which was defined as six or more CAEs scored equal to or stronger than 5 or –5. The mean scores of the participants' responses indicated that MEs could be successfully induced using repetition. These scores also indicated that the reversal of the pairings of the orientation and hues interfered with this effect (see Figure 1).

Figure 1: Mean Scores of Responses to O-C CAE Experiment for Hypnosis Unit and First-Year Participants



First-year and hypnosis unit participants both reported CAEs appropriate to the colour-orientation contingencies at induction. Figure 1 demonstrates the similarity between the CAE responses provided by both groups. It also represents the increase in the responses during the first four series, and the change in direction of the responses when the orientation-hue pairings were reversed in series 5 to 8.

The significance of the associations between group membership and CAE responses was examined using a mixed model analysis of variance (ANOVA). The three repeated-measures factors used in this analysis were test (8 levels: tests 1–8), orientation (2 levels: horizontal and vertical), and location (2 levels: inner and outer). The between-groups factor was group (2 levels: hypnosis unit and first-year). This analysis revealed a significant main effect for test ($F(7,378) = 30.834$, $p < .0001$) and orientation ($F(1,378) = 28.159$, $p < .0001$). Significant two-way interactions were also indicated by this analysis, which included test by orientation ($F(7,378) = 4.151$, $p < .0002$) and test by location ($F(7,378) = 2.256$, $p < .05$). There were also two significant three-way interactions found, including test by orientation by location ($F(7,378) = 5.401$, $p < .0001$) and more importantly, group by test by orientation ($F(7,378) = 3.826$, $p < .0005$). To further investigate the latter three-way interaction, separate ANOVAs for

vertical and horizontal test orientation conditions were conducted. These analyses revealed that the test by group interaction was significant for vertical edges ($F(7,378) = 2.105$, $p < .05$). However, the test by group interaction for horizontal edges was not significant (see Figure 2a and 2b).

Figure 2a: Horizontal Test Contours

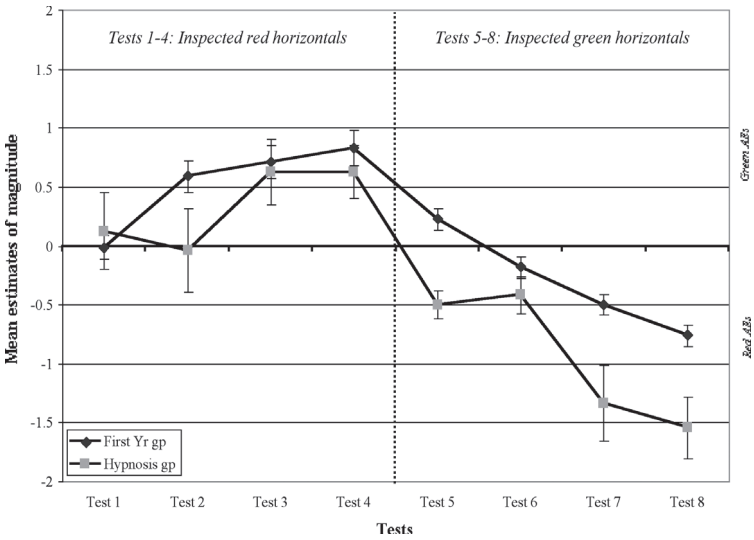
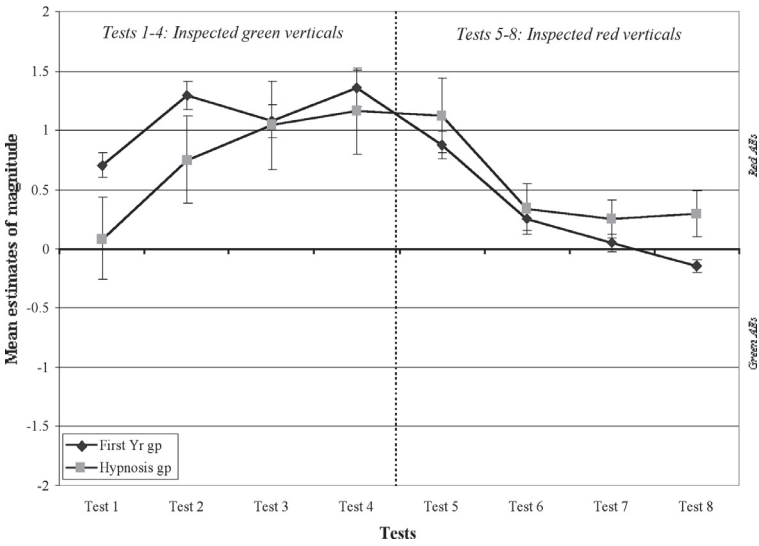


Figure 2b: Vertical Test Contours



These figures show the mean estimates of magnitude, and demonstrate that the participants tended to favour red over green CAEs. This is more evident in Figure 2b, where the orientation was vertical. For this orientation, the hypnosis unit participants reported red CAEs more slowly than the first-year participants. This group was also more likely to report red CAEs when the induction conditions favoured green.

DISCUSSION

This first study in the series of studies on this topic sought to investigate the "common factor" hypothesis, which proposes that there may be a variable that accounts for the individual differences that are widely recognised in susceptibility to optical illusions and hypnotic phenomena. Fantasy proneness, dissociation, and preferred sensory modality were all investigated as possible influences on susceptibility to O-C CAEs. Two student groups were tested to explore this hypothesis, with the results indicating that the hypnosis unit participants were more fantasy prone and dissociative than the first-year participants. The results indicated that on the vertical gratings, there was a significant interaction of student group by test. This indicates that the hypnosis unit participants may have experienced stronger CAEs as a result of their higher levels of fantasy proneness and dissociative ability, suggesting the possibility of an association between fantasy proneness, dissociation, and susceptibility to O-C CAEs.

A second finding of the current research was that the scores on the DESII and ICMI were significantly correlated. This confirms previous research, although such association does not always hold true. We also know that these variables have been correlated with hypnotisability previously (Wilson & Barber, 1983a; Frankel, 1994).

The results indicated that normal or corrected-to-normal visual acuity had a significant effect on the strength of the CAEs reported by participants. This finding is consistent with the physiological and conditioning explanations of MEs. These explanations focus on the importance of visual acuity and colour vision in explaining individual differences in ME responses. Unfortunately, the influence of colour vision could not be explored, as a portion of the sample was not tested on this characteristic. However, the results indicated that normal or corrected-to-normal visual acuity influenced the strength of CAEs reported by participants. There were other differences that were not explained by this characteristic, which lends further support to the proposal to examine the influence of other variables on susceptibility to O-C CAEs.

Another finding of the current study was that the induction of the McCollough effect could be successfully completed using repetition. This was demonstrated by the increase in the strength of reported CAEs from series 1 to 4. This finding is consistent with Skowbo and Rich's (1982) proposal that participants' abilities to recognise subtle illusory colours on achromatic test stimuli are enhanced with increasing exposure to MEs. The results also indicated that the reversal of the orientation and hue pairings in series 5 to 8 resulted in a decrease in the strength of participants' reported CAEs. This indicates that the participants may have been confused in series 5 and 6, with the CAEs continuing to weaken until the eighth induction series. These findings are consistent with reports that exposure to pairings orthogonal to those used during inspection will result in CAEs being neutralised (Over, 1977). They also question the durability of MEs, as it has been reported that these effects can last for weeks and months (Humphrey, 1998). These findings also demonstrate that it is possible to reverse these effects, which suggests that they may not be as robust as some have reported.

The results of this research indicated that participants were more likely to report red over green CAEs, and this type of result has not been reported in previous research. It is proposed that these findings are a result of the green and red hues possessing different characteristics; that is, one hue may have possessed a weaker saturation than the other. Webster, Day and Willenberg (1988) conducted a study examining whether coloured shadows, which were the chromatic equivalents of real induction colours, could induce O-C CAES. They found that the coloured shadows failed to produce CAEs, and stated that this was not a result of the different characteristics of the hues. However, the fact that the participants in the present study were favouring the red CAEs suggests perhaps that these hues were not chromatically equivalent. Thus, future studies need to be aware of the importance of the equivalence of induction colours.

No significant correlations were identified for preferred sensory modality and susceptibility to CAEs. This is an interesting finding, as it was predicted that having a preference for processing information visually would result in a higher susceptibility to O-C CAEs. There had not been any previous research that had explored this relationship, and the findings of the present study suggest that this factor does not appear to have any relationship with a person's susceptibility to O-C CAEs. This finding is consistent with the non-physiological explanations that have been provided, and implies that this effect is processed at a higher level (e.g., Brand, Holding, & Jones, 1987; Dodwell & Humphrey, 1990).

The results of this research provide partial support for the hypothesis, which predicted that there would be an association between susceptibility to O-C CAEs and the personality traits, fantasy proneness, dissociation, and preferred sensory modality. A non-significant relationship was identified between levels of dissociation and fantasy proneness and reported CAEs for the hypnosis unit participants, in that those that scored highly on the measures reported stronger CAEs. Thus, the findings of this study extend the field of research stimulated by Erickson and Erickson's (1938) findings regarding hypnotised participants' abilities to see illusory colours. These results demonstrate that there may be a significant association between O-C CAEs and hypnotisability, which lays the foundation for future research regarding the "common factor" hypothesis.

Limitations

There were a number of limitations in the present study that were noted for the follow-up studies. First, not all participants were tested for colour vision, which meant that this factor could not be ruled out as a possible influence on susceptibility to O-C CAEs. Second, the sample used in this study may not have been representative of the entire sample. This sample was representative demographically; however, the students who participated may have been biased towards this type of experiment. As a result, the participants may have been more fantasy prone and dissociative than the normal population (and this certainly seemed the case in the group of hypnosis students). Third, the characteristics of the induction hues were not equivalent, which may have had a negative influence on the results.

Practical Implications and Conclusion

The results of this study offer important conclusions concerning susceptibility to O-C CAEs. First, it is likely that an association exists between susceptibility to these phenomena, fantasy proneness, and dissociation. Second, these findings strongly suggest that there may be a common factor that accounts for the wide individual differences recognised in susceptibility to optical illusions and hypnotic phenomena.

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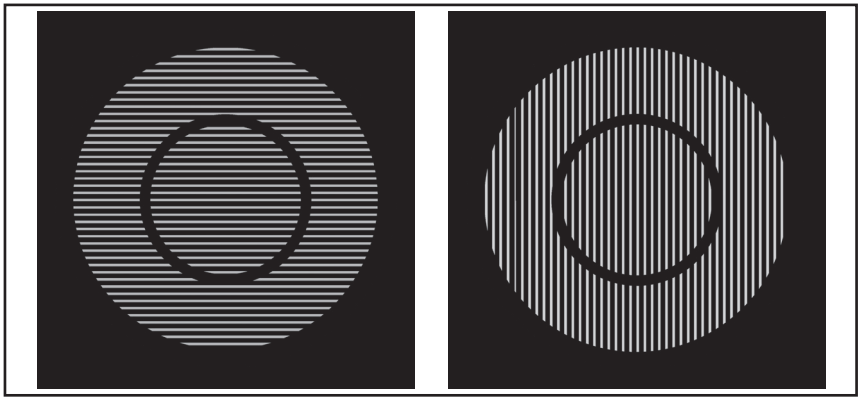
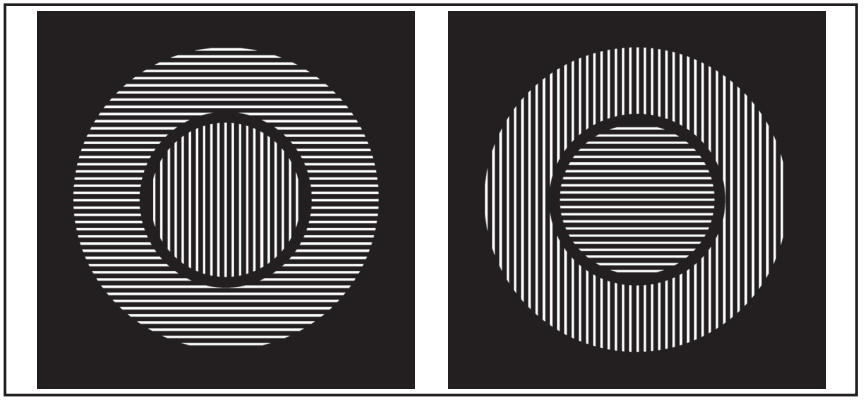
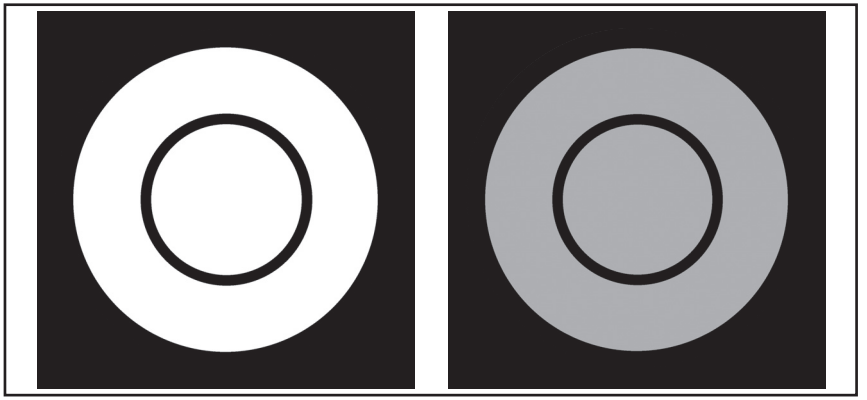
Appendix: Samples of McCollough colour aftereffect induction slides



Samples 1 and 2 of McCollough colour aftereffect induction slides



Samples 3 and 4 of McCollough colour aftereffect test slides



Simple colour after image slides
Source: http://en.wikipedia.org/wiki/McCollough_effect

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From the Explicit to the Tacit: Does Hypnosis Facilitate This Knowledge Exchange?

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Many of the debates surrounding hypnosis relate to whether or not hypnosis is an altered state of consciousness or whether a person, in a state of hypnosis, is able to access parts of their mind which are not normally accessible. This article is a little different from the norm in that it is an exploration of types of knowing/knowledge, basically conscious/unconscious, explicit/tacit, relevant to psychology because a huge component of essential human mental processing occurs out of awareness. The systematic contribution of the Ancient Greek philosophers towards our understanding of the different forms of knowledge is summarised and Baumard's (1999) typology of categories of knowledge is presented. The notion that all knowledge is, or can be, based on "scientific method" is rejected and contributions of a number of modern authors (e.g., Piaget, Polyani, Nonaka) are explored in a search for the processes underlying human thinking and learning. Finally, traditional and indirect hypnosis are considered as relevant for further study of the explicit/tacit interface.

Many theories have been put forward about what possibly happens in the brain and body when a person enters a hypnotic state or goes into a normal everyday trance state, and a great deal of research has been conducted on direct hypnosis processes. However, very little research has been undertaken on Ericksonian hypnosis, which operates on implicit assumptions which are never on the surface about how a client responds to indirect suggestions. This phenomenological-style article explores explicit and implicit knowledge.

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WHAT IS KNOWLEDGE?

There appear to be two perceptual systems working simultaneously as part of the human mind. One is conscious and its mental processes operate at a very conscious level of awareness. This system leads to knowledge termed explicit or articulated knowledge. The other is out of awareness and is called the implicit learning system. It generates what we call our tacit knowledge. It is quite possible that an individual's tacit knowledge constitutes some 85% of what he/she knows. Ericksonian hypnotic techniques and neuro-linguistic programming are likely to operate within the implicit learning system. This means that hypnosis practitioners must have a special responsibility to their clients, especially with respect to informed consent.

A commonly held belief in the scientific community is that "knowledge" is a model of the real world. Positivist sciences define knowledge as a sound representation of the world, tested and validated against the real and objective, in that it is independent of people. Usually there is a strong attempt to control the environmental or situational conditions, so that "pure" knowledge can be gleaned from mere inference or even "commonsense." However, there appear to be sizeable gaps in the positivist definition of knowledge. It is evident that a number of alternative forms of knowledge exist, especially when we take the time to reflect on our experiences. Even a quick review of the day's passing will reveal many examples of "being knowledgeable"—some of enduring consequence to others (and hence subject to scientific scrutiny), others being consciously ephemeral, while a good many more eventuate and pass without any conscious awareness. Experience itself tends to "paper over its own character," which is itself "intuitive, tacit and unique" (Baumard, 1999). Nonaka (1991) writes that "knowledge is a multifaceted concept with multilayered meanings" and notes that the history of philosophy since the time of the ancient Greeks "can be regarded as a never-ending search for the meaning of knowledge" (p. 15).

Spender (1993) wrote that "there is nothing commonsensical about [knowledge]; we inevitably assume away the difficulties or find ourselves with a Russian doll in which there are more knowledge puzzles inside every set of answers" (p. 4).

The work of Chomsky (1987) is relevant and important to this discussion. His tilting of the nativist versus empiricist debate towards the existence of deep inherent a priori logical and language structures implies a deeper, palaeontological substrate to all of the modern mental processes. It is clear

that a lot more data processing occurs in the brain than that of which we are aware. Ericksonian hypnosis and neuro-linguistic programming have helped us understand the importance of acknowledging such structures.

We move onwards. The first dichotomy we present in our psychological discussion of knowledge is found in the distinction between explicit (objective) and tacit knowledge. We can say that tacit knowledge corresponds generally to unconscious knowledge. Polanyi's work, and his distinction between objective and tacit knowledge, has become extremely influential. In his major publications, *Personal Knowledge: Toward a Post-Critical Philosophy* (1958), *The Tacit Dimension* (1966), and *Knowing and Being* (1969) he argued effectively for the importance of tacit knowledge—knowledge for which origins and essential epistemic contents were simply not part of one's ordinary consciousness (Polanyi, 1958). Polanyi classified human knowledge into two categories. Explicit or codified knowledge refers to knowledge that is transmittable in formal, systematic language, while tacit knowledge has a personal quality that makes it hard to formalise and communicate. Nonaka writes that "tacit knowledge is deeply rooted in action, commitment, and involvement in a specific context" (1994, p. 16). In Polanyi's own words, it "indwells" in a comprehensive cognisance of the human mind and body. Spender (1996, p. 67) observes that the distinction between objective and tacit knowledge is a restatement of James's (1950) distinction between "knowledge about" and "knowledge of acquaintance," that is, that of which a person has a personal acquaintance. There are two important aspects of tacit knowledge that contribute to this discussion: (a) it is gained experientially, is private and is incommunicable, and (b) it is inseparable from the process of its creation and application and it has not yet been abstracted from practice (Spender, 1996, p. 67).

While positivistic knowledge has the character of being atomic and discrete, Csikszentmihalyi and Csikszentmihalyi (1988) describe tacit knowledge as being more like that being applied in the "state of flow," knowledge of which the actor was not explicitly conscious and which does not need to be fitted into, or processed through, a conscious decision-making schema.

Forms of Knowledge of the Ancient Greeks

As has been indicated above, the ancient Greek philosophers had developed a systematic approach to the different forms of knowledge. Both Spender (1993)

and Detienne and Vernant (1978) report the work of Plato,[1] who distinguished between four forms of knowledge:

1. Epistêmê (abstract generalisation)
2. Technê (capability, capacity to accomplish tasks)
3. Phronesis, (practical and social wisdom) and
4. Mètis (conjectural intelligence).

Epistêmê[2] refers to knowledge that is universal, shared and circulated, which we teach and preserve and what we commonly refer to as our heritage. It is knowledge about things. It is often referred to as "theory." Technê, on the other hand, is translated as either "craft" or "art."

As Parry observes:

> Outside of modern science, there is sometimes scepticism about the relevance of theory to practice because it is thought that theory is conducted at so great a remove from reality, the province of practice, that it can lose touch with it. In fact, at the level of practice, concrete experience might be all we need. And within science, theory strives for a value-free view of reality. (2003, p. 1)

A sensible balance is reached, however, by Lewin, who once quipped that "nothing is more practical than a good theory" (1951).

Baumard (1999, p. 55) has devised and presented a comprehensive typology of categories of knowledge based on these ancient ideas. His analysis extends to a definitive range of divisions, including definition, cohesiveness, horizon, field, structure, nature, goal sought, emergence, process, elaboration, method, preservation, state, and teaching or initiation.

Phronesis is the opposite of epistêmê. It is personal, singular, and idiosyncratic, the result of experience and social practice. It cannot easily be shared. It has vivid meaning only to the person who has lived the experience. It is generated only through the "intimacy of lived experience" (Baumard, 1999). Phronesis is usually the result of trial and error; it comes from interactions in social or organisational life and is very difficult to subject to analysis or test. Because it is difficult to characterise and operationalise, it is especially difficult for science to observe and evaluate. In fact, its intuitive content makes it difficult for science to study. The first author [K.D.] sought for several years to attempt

1 Plato thought of knowledge as justified true belief, an idea that has been rejected in current sociological thinking.

2 "Science" derives from the Latin *scientia*, which in turn translates the Greek *epistêmê*, from which English derives "epistemology." Strictly speaking, for the Greeks, for something to be studied it needed to be *epistêmê*.

to characterise this knowledge phenomenon from a scientific perspective. This quest has brought about a resignation that it required a radical new paradigm,[3] one that abandons the scientific method and relies on more sociological concepts such as *intersubjectivity*[4] or *communities of practice*.[5]

Mètis, or conjectural knowledge, is of personal interest to the first author. It is:

> furtive, discretionary and simultaneous, it spurns idealisations and established representations—it provides a contrast to abstract generalisations on every point. Where one [epistêmê] is hierarchical, the other is organic, indivisible, encapsulated in action. Where one tends towards universality, the other chooses the ephemeral as its playing field (as it is only the tactical outcome that counts). Where one seeks truth, the other seeks results. (Baumard, 1999, p. 54)

Mètis is like Prospero's Ariel, a personification of the wizard's shrewdness and cunning. Where epistêmê is steadfast and reliable, the result of a long maturation, mètis is unpredictable and intuitive. In short, where one can be analysed, the other is multiple and tacit. Most importantly, conjectural knowledge is embodied into purposive behaviour, and does not make sense out of the limitations of its instrumental boundaries.

Husserl advised, in his Paris Lectures of 1929, that doing science is an admirable human venture, but to apply science, a subset of human endeavour, to the totality of human experience and expression is not logically coherent. We do not seek to ignore or diminish the power or scientific thought, we only wish to bring attention to its relevance, and that is to the area of epistêmê. The ancient Greek analysis provides clear guidance, pointing the way for using forms of analysis that are not aimed at trying to impose the scientific method onto forms of human expression that do not adhere to their requirements.

NATIVIST ARGUMENTS—PHYLOGENY AND IMPLICIT LEARNING

Nativist arguments are those that presuppose that there are human systems of behaviour that "arise from the tissues," that is, are in some way evolved through the human species and then expressed through human thought and action. They oppose the idea that all behaviour is learned or that all behaviour

3 Kuhn (1970).

4 Berger and Luckmann (1966).

5 Wenger (1998).

is somehow externally formed and directed. Nativists believe that much of human behaviour comes from the "hardware" of the human nervous system, if I could borrow this analogy from the computer sciences. It is a decidedly humanistic materialist perspective.

Chomsky and Deep Structures

Chomsky (1987) makes the uncontroversial point that there is a fundamental organisation to the physical development of the human body. We all make the assumption that the human species has a certain biological endowment. Each of us develops according to our inherited genetic program, with an epigenetic unfurling of new growth according to what has grown before within our complex environment. The result is an interacting, integrated series of biophysical systems, each mutually supportive according to a predetermined blueprint. He writes:

> It is fortunate that we have such a refined and specific innate endowment. Were this not so, each individual would grow into some kind of amoeboid creature, merely reflecting external contingencies, utterly impoverished, and lacking the special structures that make a human existence possible. (Chomsky, 1987, p. 419)

There is an important corollary. The same native factors that bring about this ordering principle also prevent many other possible developmental outcomes and drastically limit the final states that can be reached in physical growth. Although the developmental biology sciences provide much knowledge, there is little known about how all of this happens. However, no one really doubts that there must be some kind of internal, innate mechanism afoot. This is obvious because there is "a vast qualitative difference between the impoverished and unstructured environment on the one hand, and the highly specific and intricate structures that uniformly develop, on the other" (Chomsky, 1987, p. 420). Chomsky applies this analysis to the human mind. He says that we also find structures of great intricacy developing in a uniform way without the benefit of learning, in fact with limited and unstructured experience. Language is a case in point, but there are also other faculties. "Think of the capacity to deal with abstract properties of the number system, common to humans apart from gross pathology, and, it seems, unique to human" (p. 420)

This ability to cogitate on the number system or on other abstract properties, such as time, space, relationships or causality—capacities that lie at the basis of managerial endeavours—are all, in essence, unlearned, and are based upon our biological endowment. As with physical systems, these

mental systems develop epigenetically; that is, each successive development stage depends on what has been achieved beforehand. Biological readiness is a necessary precursor for environmental influence to have any meaningful influence on these capacities.

Chomsky also argues that this same biological endowment provides the basis for a social existence in common with others. Even though we may have differing environmental histories, we nonetheless share capacities that support commonalities in practice. He extends far beyond nativist arguments when he writes: "We live in a world of shared understanding that extends far beyond the limited experience that evokes cognitive structures in the mind" (1987, p. 420).

Reber and Implicit Learning

Arthur Reber dedicated much of his research career to the study of implicit learning. He defined implicit learning as the "acquisition of knowledge that takes place largely independently of conscious attempts to learn and largely in the absence of explicit knowledge about what was acquired" (1993, p. 5). One of the core assumptions of Reber's work was his belief that implicit learning is a "fundamental 'root' process, one that lies at the very heart of the adaptive behavioural repertoire of every complex organism" (p. 5). Drawing on the heuristic strength of Darwin's evolutionary theory, he goes so far as to assert that implicit learning has phylogenetic precedence over learning with awareness. He proposed four considerations, which the first author refers to as Reber's Darwinian Postulates. The first author has drawn closely on Reber's own explanations, which are:

1. Consciousness and phenomenological awareness are recent arrivals, phylogenetically speaking. This is in accord with Darwin's own proposition,[6] Consciousness and conscious control over action must have been built upon, as it were, deeper and more primitive processes and structures that functioned independently of awareness. On these grounds, it can be assumed that implicit processes operate independently of consciousness and are more primitive and basic than those that are dependent on consciousness and conscious control.
2. One of the standard heuristics in evolutionary theory is that phylogenetically older and more primitive structures are more robust and resilient and less prone to disruption than the newer. One would expect to see

6 Darwin considered conscious control an evolutionary failure, largely because of all the biases that come into being because of the very nature of individual and group consciousness.

implicit cognitive structures show greater resistance to interference from neurological insult, functional disorder and hypnotic intervention.

3. The evolutionary more ancient implicit functions of the cognitive unconscious should show a tighter distribution in the population than the more recently emerging explicit and the conscious. This implies that we would expect to find fewer individual differences between people when implicit processes are in use than when explicit processes are. The more successful an evolutionary adaptation, the less likely will it display variation. Also, as most of our educational programs and theories of instruction are based on explicit, overt paradigms, we must expect, in our culture of inequalities, an increase in population variance on virtually any explicit cognitive function that we measure.
4. There should be a relationship between a phylogenetic point where a particular property evolved and the degree to which we are conscious of its form and content. That is, we would expect to find that the more primitive a function is shown to be, the more refractory to consciousness it will be. Hence one finds the reliability of such hypnotic responses as ideomotor responses and the relative rarity of complete hypnotic amnesia.

It is surprising that the evolutionary heuristic is not used more frequently in modern psychology. It formed the basis for Piaget's cognitive theories, of Kohlberg's (1981) moral development, and even of Tuckman and Jensen's (1977) team development theory. Nonaka (1994) would argue that this is because we are in the "knowledge society" and, as observed by Drucker (1967), a time where the forces of empiricism far outweigh the nativist approaches.

Knowledge creation relies on the interaction of explicit and tacit knowledge. Polanyi's work was philosophical, but Nonaka believed that it was possible to expand his idea in a more practical direction. Tacit knowledge involves both cognitive and technical elements. The cognitive elements centre on mental models that the human mind creates, and include such devices as schemata, paradigms, beliefs, and viewpoints which provide perspectives that enable individuals to perceive and understand their world. Meanwhile, tacit knowledge also covers technical elements such as concrete know-how, crafts, and skills that apply to specific contexts. The cognitive components of tacit knowledge are future oriented, that is "what is" and "what might be likely." Nonaka (1994) points out that the articulation of tacit perspectives is a kind of mobilisation process, a key factor in the building of new knowledge.

Piaget and Cognitive Growth

The life work of Jean Piaget (Gruber & Vonèche, 1977) is focused on the developmental sequencing of the logical cognitive structures. He was guided by the logical theory of Poincaré (Gruber & Vonèche, 1977, p. 457), who maintained that the human mind is capable of some 42 logical operations, each dependent on more elemental, less complex logical forms. Piaget's genius was to realise that the growth of logical operations was epigenetic, that is, it formed according to successive stages over a long time period, from concrete logical operations during the first few years of life, such as sequencing, correspondence and grouping, to the highly sophisticated logical forms of correlation, probability and regression analysis, which come much later in life and only to relatively few. Piaget was clear that these structures were immanent and implicit, and only become explicit in the study of their forms, such as in the disciplines of mathematics and logic.

Bateson (1990) refers to the analogue quality of tacit knowledge, a continuous activity of knowing. He sees communication between individuals as an analogue process that aims to share tacit knowledge to build mutual understanding. This understanding involves what he terms "parallel processing" of the complexities of current issues, as the different dimensions of a problem are processed simultaneously.

Intention, Autonomy, and Fluctuation

Polanyi noted that individuals are the prime movers in creating their own world in accordance with their own perspectives. He noted that *commitment* underlies human knowledge-creating activities and that three factors contribute to the strength of this commitment: *intention, autonomy*, and a certain level of environmental *fluctuation*.

Husserl's (1929) analysis of consciousness is instructive to those who wish to promote change. He denies the existence of conscious awareness per se, arguing that consciousness arises when a subject pays attention to an object. This attitude on the part of the individual is termed "intentionality." Any form of consciousness is consciousness of something: it arises, endures and disappears with a subject's commitment to an object.

The principle of autonomy permits the development of intention. Our current ideals of empowerment and self-efficacy seek to assure autonomy where only "minimum critical specification" (Morgan, 1986) is provided and monitored. Nonaka (1994) believes that individual autonomy widens

the possibility that individuals will motivate themselves to form new knowledge. From the work on emotional intelligence, Salovey and Meyer (1990) propose that self-motivation is based on deep emotion that drives us, through metaphor and allegory, to achieve personal goals. Purpose serves as the basis of conceptualisation, while autonomy provides the freedom to absorb knowledge.

Environmental fluctuations cause disruption to the intentionality of individuals. *Chaos* or discontinuity can generate new patterns of interaction between individuals and their environment that take into account ambiguity, redundancy, noise or randomness generated from the organisation and its environment. "Order without recursiveness" represents an order where the pattern is hard to predict in the beginning (Gleick, 1987).

Knowledge Conversion

The idea of *knowledge conversion* has been well developed by Nonaka (1994). He traces the idea back to Anderson's ACT model (Anderson, 1983), developed in cognitive psychology. This model is based on two concepts, *declarative* and *procedural* knowledge. Declarative knowledge (actual knowledge according to Anderson) is expressed in the form of propositions, and procedural knowledge (methodological knowledge) is used in such activities as playing the guitar or walking down stairs. In our discussion, the former might be considered as explicit knowledge while the latter as tacit knowledge. In this model, Anderson hypothesises that declarative knowledge has to be transformed into procedural knowledge in order for cognitive skills to develop. One might acknowledge that Anderson's hypothesis is a more sophisticated version of Ryle's (1949) classification of knowledge into knowing that something "*exists*" and knowing *how* it operates. Nonaka (1994) identifies one limitation of the ACT model—it says that knowledge transformation is unidirectional and only involves transfers from declarative to procedural knowledge, while as anyone who has ever learned a new skill will avow, such transformations are bi-directional. He has developed a conception of the tacit-explicit interfaces.

Nonaka (1990) has developed a theory that explains the four mechanisms of knowledge exchange. He introduced the word "socialisation" to describe the communication of tacit knowledge at an unconscious level, "articulation" to illustrate how the tacit emerges into the explicit, "combination" to show how explicit knowledge is shared at a conscious level and "internalisation" to borrow from Kelman's (1958) idea of internalisation of ideas from explicit examples to tacit understanding.

1. *From Tacit to Explicit. Articulation*—this form of conversion occurs as the continual foundation of life. The way that tacit rules become recognised as internal regulations is a good example. That which is commonly known, and which we could call "common knowledge," is gradually articulated into explicit knowledge.
2. *From Explicit to Explicit. Combination*—the conversion of explicit knowledge into another form of explicit knowledge is a question of combination. Nonaka notes that "individuals exchange and combine their knowledge through mechanisms such as telephone conversations.[7] The combination of existent information can be facilitated by the selection, addition, grading, and categorisation of explicit knowledge" (Nonaka, 1992, p. 13)
3. *From Explicit to Tacit. Internalisation*—Foucault's (1977) panoptic prison, in which "the potentiality of inspection replaces its deployment," provides an exemplary illustration of internalisation:

   > The panoptic prison is circular, made up of open cells through which light passes in order to sharply outline the silhouettes of the prisoners. The warden is lodged in a tower at the centre of the circular building, which is fitted with blinds enabling him to "see without being seen." In this context, prisoners have explicit knowledge of the surveillance tower. They recognise the possibility that they are being watched at any given time, without it being possible to know whether the warden is really looking at them or at something else. The prisoners internalise this explicit knowledge, and turn it into tacit knowledge; they know tacitly that they may be watched at any time and accept the possibility. While the explicit expression of their knowledge amounts to a black tower at the centre of the building, their tacit knowledge has internalised the "presence" of the warden within this obelisk. (Baumard, 1999, pp. 25–26)

4. *From Tacit to Tacit. Socialisation*—this mode of knowledge conversion allows us to pass tacit knowledge on:

   > An individual can acquire tacit knowledge directly from another without the use of language. Artisans live with their masters from whom they learn their art not through language but through observation, imitation, and practice … Tacit knowledge conversion is based on the sharing of experience. (Nonaka, 1992, p. 13)

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7 Nonaka did not seek to delimit this exchange of knowledge here, he was mentioning this communication form in passing. Other forms include face-to-face discussions, group meetings, emails, bulletins, letters and so on.

Modelling is a form of learning that is evident to us all. Rather than hypothesise some "unconscious" entity to account for such learning we can rest assured that it is simply our implicit learning facility that has copied a schema and represented it according to what exists within the realm of our personal tacit knowledge. Recent advances in Susan Blackmore's (1999) views on meme theory support this account. A central question for meme theory is whether units of behavioural/cultural replication act as genes, or whether they are simply learned patterns of behaviour, assimilated early in life, that reside within the tacit stores.

DOES HYPNOSIS HAVE A ROLE IN THESE TRANSFERS?

From the available literature, from personal practice of hypnosis and from experience as an hypnotic subject, it seems to us that traditional hypnosis, involving use of suggestion after production of an altered state of consciousness, provides a pathway to access/influence tacit knowledge stores. This method, used carefully and respectfully, allows use of fully informed consent. The hypnotic subject can be trained to go into trance, the methods of verbal instruction, experiencing of imagery and emotions can be demonstrated and the full plan and its predicted effects discussed with the subject. The literature on clinical uses of hypnosis shows that the impact of traditional hypnosis can be dramatic and powerful. I cannot help but think that there are essential links between the style of discourse generated by the hypnotist, be it based upon epistêmê (abstract generalisation), technê (capability, capacity to accomplish tasks), phronesis, (practical and social wisdom) or mètis (conjectural intelligence) and how these match with the cognitive style preferences of the client and the likelihood of therapeutic success. Examples are many: The first author's case book, on reflection, generates many examples where differing approaches provided intuitively derived tactics that mirrored clients' particular knowledge preferences.

> A 62 year old woman, recovering from a long illness says, "I am getting stronger with each new day" [epistêmê].
>
> A young footballer kicked his way into the record books by imagining that he was not only kicking the football but was a miniature test-pilot sitting on the airborne ball as it hurtled towards the centre of the goal posts [mètis].
>
> A dyslexic young schoolboy read steadily from his workbook, free of mistakes [technê].

> A young woman spoke courageously on how she would next approach her micromanaging supervisor [phronesis].

Clinical uses of traditional hypnosis are underpinned by a huge data base of research, much of it with subtle, innovative and highly appropriate methodology.

Indirect hypnosis, developed from the initial work by Milton Erikson, seems to provide a different method of access/influence to tacit processing. The research literature underpinning this method of "hypnosis" is sparse and the clinical methods using indirect hypnosis do not conform to the modern requirements of informed consent. Most of the literature in the area is clinical. It is almost certainly a different method of access to the tacit than is traditional hypnosis. In conclusion, however, it must be said that both traditional and indirect hypnosis methods are a fascinating possibility for further study of the explicit/tacit interface.

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Milton H. Erickson and Hypnosis: Reflections

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When I was asked to write an article on Milton Erickson's contribution to hypnosis I was perplexed: What could I say that has not been said by others already? Rather than focus on his techniques, I thought it might be interesting to provide some background information on some of the ways that his work has spread throughout the professional community and influenced so many clinicians. In part, it is also a story about my own journey with hypnosis through the years: how opening a window can let you see more clearly than through the pane, and allow the rainbow hues of experience and knowledge to enter your soul and become part of your personal and professional being.

There can be little argument that Milton Erickson was one of the greatest innovators in hypnosis in the 20th century. His original approach to hypnosis and hypnotherapy, using indirect suggestion, ordeals, unconscious search, and many other techniques with which we are familiar today, as well as his extraordinary understanding of people, made him an outstanding clinician. Some of this expertise came from his training in medicine and psychiatry, and some from his observations of, and insight about, the people whom he treated.

Much of his early experience was limited through physical incapacity following a battle with juvenile polio; he was unfortunate to suffer a second bout of polio later in life, which left him with significantly reduced physical function. With so much restriction in his physical activity, both during and after his illnesses, there was plenty of time for such an agile brain to entertain itself by watching the behaviour of those around him. I believe that it was this level of physical infirmity which led him to be such an acute observer of human nature.

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Others have written a great deal about Milton Erickson, several of whom knew him personally for many years. It is interesting, as a "third generation" clinician who has been trained in his techniques, to discuss the influence of his treatment philosophy and the ripple effect, both temporal and geographic, of that knowledge as it was passed on to many thousands of people in the professional community.

Some of the people who were closest to Erickson in the latter part of his life and who have had the most profound effect on propagating his teachings include Ernie Rossi, Jeff Zeig, Kay Thompson and Bob Pearson. Collectively, they have provided a depth to this cultivation. Ernie and Jeff are psychologically trained, with Ernie being predominantly a researcher and writer. Kay was a dentist, and Bob a medical practitioner. No doubt many of you reading this article will have read books by Ernie and Jeff, both of whom have been prolific writers in the field. As far as I am aware, there is only one book of Kay's work, and that was published posthumously. All four authors have been long-time teachers of Erickson's ideas and philosophy, and have had a profound influence on the growth in popularity of his techniques.

More recently, professionals such as Michael Yapko, Sid Rosen, Joseph Barber and Stephen Lankton, to name but a few, have written books on the application of his techniques in their particular fields, and Rubin Battino and Tom South collaborated on a comprehensive training manual of Ericksonian approaches.

Other proponents of Ericksonian hypnosis, such as Richard Bandler and John Grinder, have performed a meta-analysis of his work to determine the structure of magic and have found the psycholinguistic techniques that Erickson used to turn frogs into princes. Their work has become known as neuro-linguistic programming, but is an evolution from the original concepts of Milton Erickson.

It is a fitting tribute to Dr Erickson that so many intelligent and capable clinicians have chosen to follow his lead in clinical applications and to continue to propagate his methods. There are also institutions devoted to teaching his ideas—the principal of which is the Milton Erickson Foundation in Phoenix, Arizona—and many other organisations with similar names in San Diego, Italy, Germany, Sweden, Australia and other parts of the world.

So what is "Ericksonian hypnosis"? The short answer is that it is the way communication was used by Milton H. Erickson. We can all aspire to use the techniques he developed in the best possible way, within our own abilities and knowledge and within our areas of expertise, but none of us is Milton

Erickson, and we will all tint our usage of his techniques with the colours available on our palette, and hopefully create patterns of images which are pleasing and effective to those who seek our help.

Just as no one can create paintings as the old masters did, so we can expect to "fail" if we try to be the same as Erickson. It is certainly possible to copy a painting with considerable fidelity, using the same hues and similar brush strokes, but there is always something missing—the "soul" of the artist. If we can accept and enjoy the results that we ourselves can produce using the same tools and the same techniques as used by a master, as we put our soul into the creation, surely it is of no less value to a beholder than an original which is no longer available.

My introduction to Erickson's techniques was at the combined ASH/ISH meeting in Melbourne in 1979. At this time, I had been practising dentistry for 10 years and had completed my basic hypnosis training with the Australian Society for Clinical and Experimental Hypnosis, the precursor to ASH, a few years previously. One of the speakers at this conference was a delightful woman by the name of Kay Thompson, whose creative use of language totally captivated me. It released me from the traditional model of eye-fixation progressive-relaxation which was (and still is) taught to those beginning to use hypnosis, and which had been my modus operandi for the preceding four or five years.

Although I was aware of rapid induction techniques, these did not sit comfortably with my personal philosophy and method of working with patients. I had always talked to patients while treating them, using the methodology and phrasing of progressive relaxation, and although this produced satisfactory results, it was time-consuming to use as a technique separately from clinical dentistry. It was also very boring over time, and as Kay Thompson had said on many occasions, "dentistry is a boring profession!"

The awareness that words could be used in such powerful ways to change patients' cognitive functions and internal processes was a revelation which changed the way I thought about hypnosis and the way I utilised it in my clinical practice. I immediately bought the four volumes of Erickson's *Collected Papers* and read them from cover to cover. This may seem like a lot of work, but for me it was an enlightenment and the exploration of a new reality of which I had not been aware, like the opening of a window. The papers are grouped by subject material, rather than by publication date, and some of them were published many years after the original drafts were written, but I found that an awareness of the dates of writing gave me a great deal of insight

into Erickson the man, as well as Erickson the clinician, and into the way his approaches had changed over time.

Two years later, in 1981, Kay Thompson returned to Australia as one of the two principal speakers at the ASH conference in Adelaide. There she taught hypnosis to students for three days in a row. I vividly recall how the delegates were split almost equally into the two teaching strands on the first day, but by day three all but a few could be found in Kay's workshop. One could not help but feel sympathy for the presenter who was sharing the program with the amazing Kay Thompson.

Kay had studied dentistry in the 1950s and was the only woman in her year, if not in the whole faculty; she was also more than six feet tall and was very slim, with an overly long face which had been affected by acne. All these factors combined to make Kay a very shy person. She said of herself: "I was not always like I am now. While at university, if anyone wanted to find me they would feel along the wallpaper at the back of the lecture theatre, and when they came to bump that would be me!" Erickson recognised Kay's special qualities and encouraged her to undergo her metamorphosis and to emerge from her chrysalis and be the person she became.

Kay was not only a good communicator and excellent teacher, but also a very caring and gentle person. When watching her work with a demonstration subject, one could not help but be impressed by her total involvement and awareness. Not only was she able to communicate with her subject in a clinically effective way, but she could protect that person from anything they did not want to reveal in a demonstration situation, and yet still provide a valid learning experience for all the onlookers. She was also able to motivate and encourage those in her workshops to follow their own paths and achieve their own individual levels of excellence, as Erickson had done for her. It was thus that I was motivated by Kay Thompson to return to university studies and complete a psychology major before continuing to an MSc and a Diploma of Clinical Hypnosis.

I had planned to attend the Erickson Foundation meeting in Philadelphia the following year, but the outbreak of Legionnaires' disease in that city at the time made such a visit inadvisable. As it happened, Milton Erickson died some months before this meeting, which was later reshaped as a Memorial Meeting to celebrate his life and teaching.

My first pilgrimage to Phoenix occurred in 1983 when I went to the Erickson Foundation training seminar and Second International Congress. This was followed by five more visits, variously to Los Angeles, San Francisco

and Phoenix, and yes, I did climb Squaw Peak! It was only when I returned some years later and again completed the "ordeal" of this climb that I realised how far it is and how long it takes. I understood then just how powerful suggestions can be, even when indirectly received, and how long they can act through one's unconscious mind.

Over this period, as well as being an avid workshop attendee, I had the opportunity to co-present with Kay Thompson on several occasions, and to assist with workshops presented by Sid Rosen and Jeff Zeig. It was as a guest of the Erickson Foundation and under Kay's guidance that I was able to meet and talk with all of those people in the Erickson fraternity who had merely been names to me up to that time. The most notable traits these people all had in common were their sincerity, their generosity, and their love for Milton Erickson.

I have many wonderful memories of these visits, but one of the highlights was something that occurred at a meeting in Phoenix. The dentists present at the meeting, all 10 of us including Kay Thompson, had been out to dinner. As we walked back to the hotel, Kay asked me if I would like to an assist her with a dual group induction the next morning, around 10 o'clock. I readily agreed, reasoning we would have plenty of time in the morning to prepare the joint presentation. When I arrived at my room there was a voice mail message telling me that we started at 8.30 am! As it was already late, I tried to get a good night's sleep.

I called Kay's room at eight the next morning to find that I had woken her. In spite of this, we started on time and presented successful demonstrations of group dual inductions for the next hour and a half. A measure of the quality of this workshop is that the audiotapes of this session have been the biggest sellers of the Erickson Foundation, and transcriptions have been included in two textbooks.

A demonstration such as this is rather similar to a jazz jamming session, where there is a score to follow, but the specific performances depend on the mood and skills of the performers and the interaction between them. Kay was the lead player in this duo, with me providing the counterpoint, but the success and enjoyment was a result of the interpretation, in unpredictable ways, of the interaction of the two of us by the members of the audience.

Kay passed away prematurely in May 1998, less than a year after her cancer had been diagnosed. She was one of the first of that set of reflected ripples from the wave created by the impact of Erickson, and the movement of their passing has set in motion a multitude of further spreading ripples across the

surface of the world of Hypnosis. These ripples, of which I am one, will in turn pass on to our students our understanding of the teachings of those who have gone before us. Undoubtedly their understandings will be very different from those of the man who originally developed the ideas, but hopefully our skill in utilising these ideas within our own area of expertise, and the strength of our numbers, will compensate for any lesser competence which may occur.

I will conclude with a partial quote from Saralee Kane in her dedication in *The Art of Therapeutic Communication: The Collected Works of Kay F. Thompson*, which beautifully expresses the feelings of all of us who have had the opportunity to learn from these outstanding professionals.

> To all our teachers, including our children and grandchildren; to the teachings, and the willingness to listen and observe; to the qualities embodied by all of them: wisdom, compassion, integrity, generosity, courage and kindness.
>
> With the deepest love and gratitude.

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The Use of Hypnosis for the Treatment of Hypnagogic Hallucinations

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This article is a double case study of the use of hypnosis in the treatment of hypnagogic hallucinations in clients with mild intellectual disabilities, but the majority of interventions utilised could also be easily applied to other client groups. For both of the clients, the utilisation of hypnotic techniques was a powerful supplement to more conventional cognitive-behavioural therapy (CBT) and systemic interventions. In fact, the hypnotic interventions appeared to speed up the overall treatment process significantly. For both clients, the total length of intervention was quite brief; both clients had experienced full symptom relief in fewer than six sessions, with the greatest reduction occurring between the second and third sessions.

Hypnagogic hallucinations are a parasomnia that occurs in the border between sleep and wakeful states, predominately before going to sleep (American Psychiatric Association, 2000). A person suffering from them has some breakdown in the boundaries between the dream state and wakefulness, with the former flowing through into the latter. The hallucinations seen are typically dream content from recurrent dreams most commonly of a nightmarish nature, but not exclusively so. The hallucinations may involve any of the senses, but are predominantly auditory and visual (Dement, 1999).

Understandably, sufferers and their families can be quite distressed by the symptoms and assume that the hallucinations represent some form of psychosis. For one of these clients, even the GP had made that assumption. On their own, these hallucinations are relatively harmless, although the stress of experiencing them has not infrequently been a precursor for actual early psychosis onset.

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Hypnagogic hallucinations are more common than most people realise, with an estimated 20% of the population being likely to experience at least one episode of it during their lifetime (Derment, 1999).

PRESENTING ISSUE

There were quite a few similarities with these two clients, both of whom presented to the agency with significant distress around a pattern of severe and repetitive late-evening hypnagogic hallucinations. Both of these clients also had intellectual disabilities and were adolescents.

Ongoing presentations such as those for these two clients are much rarer than single isolated episodes. It is worth noting, however, that there is some evidence that when they occur in clients with an intellectual disability, they tend to be both more extreme and more likely to be repeated, particularly during adolescence. The reasons for this are unclear, but might relate to the degree of stress generated from the first episode. There is undoubtedly a large stress component in both the onset of hypnagogic hallucinations and in their continuance (Stores, 1996).

CLIENT HISTORIES AND PRESENTATIONS

As stated earlier, both clients were adolescent males, and both also had mild to moderate intellectual disabilities, but lived in separate communities and were unknown to each other. For both clients, there were naturally serious concerns about the hallucinations for them and their immediate families. The first client, who I will call Bob, was referred by his GP for suspected early psychosis and was so distressed by his visual hallucinations that his mother reported that he was screaming in terror on an almost regular nightly basis.

Bob's hallucinations were both auditory and visual and saw him repeatedly seeing images of his dead abusive father murdering various members of his family. His father had been a very violent man, who had a long chain of convictions for violent crimes and was eventually imprisoned for murder (but not of a family member). He subsequently died in prison under somewhat suspicious circumstances.

Although the father was an extremely abusive man, deeply traumatising both Bob's mother and older siblings, Bob's own nightmarish images were not being driven by traumatic memories, as his father had been removed from the family home prior to his birth and had died in prison before he was old enough even to recall him.

However, Bob had heard stories of him from his still very traumatised mother and older siblings. He had also seen pictures of what he looked like. In some ways, his father had acquired the qualities of some mythical and evil bogyman.

The family, in spite of the father's removal years previously, was still highly dysfunctional. Nearly all the family members had criminogenic histories, mostly for property crimes but also for crimes of violence, and one brother was currently serving time for aggravated rape. There was also no work culture within the family, with all family members being on some form of government benefit. The presenting client was the only family member who was ever likely to work. (Note that since discharge, he has commenced an apprenticeship in the building trade.)

The other client, who I will call Jack, was actually referred from his solicitor for an offence that was meant to relate to auditory hallucinations. The client claimed that he was hearing voices telling him to do bad things, such as to steal various items, and also to harm his mother. Naturally, there was a certain degree of cynicism from both the police and court to these claims.

It was fairly quickly confirmed during the first session that Jack was not suffering from early psychosis; however, the symptoms did strongly suggest hypnagogic hallucinations. For instance, after some limited questioning he was able to identify the voices as belonging to a neighbourhood bully and an equally bullying workplace colleague at the sheltered workshop where he was employed. He also only reported ever hearing the voices prior to going to sleep and not before committing the offences. He also knew that he should not have stolen the property and that he had been able to avoid carrying out most of the suggestions of the voices, such as attacking his mother with an axe. It should be noted, given that he had a moderate intellectual disability, that it was highly improbable that he could have faked the symptoms for a relatively obtuse disorder. He also elected not to use it as a defence, but purely as a mitigating factor in sentencing.

Like Bob, Jack came from a relatively dysfunctional family. Many members of his family also had criminal records and his father had had a history of violence.

Both clients were experiencing extreme stress, prior to onset and afterwards, that was exacerbating the frequency and severity of their hallucinations and thus were at some risk of deteriorating into early psychosis.

CONSIDERATIONS OF SUITABILITY FOR HYPNOSIS

As stated earlier, both clients had intellectual disabilities, which could in themselves be contraindicators for the use of hypnosis. The literature seems divided on this matter (Yapko, 2003). The concrete thinking and frequent difficulty with imaginative processes would indicate against it (Harris, 2005). The greater tendency for suggestibility would on the other hand indicate in favour of its use (Hernadez-Halton, Hodges, Miller, & Simpson, 2000). Perhaps the use of hypnosis in such cases is best considered on an individual basis, in terms of both the client and the problem. I would also suggest that effectiveness would be strongly dependent on the degree of rapport and trust the client felt.

The nature of the problem both experienced would indicate that using hypnosis might be effective, given both the relationship between hypnagogic and trance states and the sense that a good therapeutic relationship had been established with both clients. Given the contraindications, some degree of caution was used and both were introduced to hypnosis as purely a relaxation method. However, as both subjects responded well to this use of hypnosis I received a good early indication that hypnosis might be suitable for them as an adjunct therapy.

GOALS OF THERAPEUTIC MANAGEMENT

There are quite a few common features to the treatment of both clients, but also important points of divergence that may be equally helpful to tease out for other clinicians.

Many aspects of treatment for both clients were similar, including the five broad components of primarily a CBT intervention. These being:

1. Stress reduction and the teaching of techniques for the management of future stress,
2. Teaching of methods to induce lucid dreaming and the management of nightmares,
3. Psycho-education and the management of actual hypnagogic hallucinations,
4. Exposure and controlled reduction of stress around the content of the hypnagogic hallucinations, and
5. Development of behavioural coping strategies to reduce current and future stress.

It is assumed that the reader is reasonably familiar with most of the above so I will not elaborate here, except perhaps in terms of lucid dreaming. Lucid dreaming occurs when a person is aware they are actually dreaming and are consequently able to alter the content of the dream as it occurs (Green & McGreery, 1994). It is possible to activate this ability in most subjects, particularly for reoccurring dreams or nightmares. The techniques of this process can also be used to a lesser extent to manage the fallout from a nightmare post waking up and are obviously useful for hypnagogic hallucinations were the subject is actually awake (LaBerge & Rheingold, 1990).

Both clients also benefited from systemic interventions to reduce stress, but obviously significantly different ones. Bob was the victim of bullying at his special school, so a brief contact with the school principal was able to relieve most of the bullying and almost all of the anxiety from it. He was also given a few basic techniques to handle the bullies if he happened to meet them in the street; a reasonable prospect given the small size of the town where he lived.

Much of Jack's stress was coming from his relationship with his mother (hence perhaps the axe use suggestion by the voice in his hallucination content). Some direct work with mother and son around mutual problem solving and anger-related issues was helpful in reducing this. As was the practical solution of allowing Jack a small allowance so he could buy things himself. This also seems to have reduced his tendency to petty theft. Jack also had a bullying problem and like Bob greatly benefited from being empowered to manage a number of different scenarios. However, there was also a need for some systemic interventions at the workplace. I arranged through the manager of the sheltered workshop to have some of the workplace bullying directly addressed. It perhaps needs to be noted that the small communities both clients came from made such interventions much easier than would be the case in a metropolitan context.

COMMENTS ON APPLICATION OF HYPNOSIS AS A COMPONENT OF THIS THERAPY

Hypnosis was utilised as an adjunct to each of these treatment components. In the first session both Bob and Jack were taught basic self-hypnosis and some simple breathing techniques for anxiety management and reduction of stress. They were both very compliant in practising these between sessions, primarily because they seemed to get quite a lot of benefit from the practices.

To aid understanding about lucid dreaming, a visualisation technique was used with the additional use of video editing and image shifting approach to reinforce the idea that images in the head can be easily changed (Yapko, 2003). I also imbedded some suggestions for the easier management of lucid dreaming.

In terms of the desensitisation work, I utilised two-screen work for Bob, who was very visual (Cardena, Maldonado, van der Hart, & Spiegel, 2004). Prior to the actual hypnotic session I had established a safe place for him to go to, and in the earlier visualisation session had rehearsed that. We also had selected alternative channels to switch to and an idiomatic signal to indicate if the channel had become too scary. This included the provision of a TV remote to change channels at home, to deal with the hypnagogic hallucinations themselves. The nightmare content was changed repeatedly to outcomes Bob found amusing—such as shrinking his ogre father to a size he could squish or put in a little cage.

With Jack I used a radio station analogy, which at first he turned off and on and then took control. I also did some core work around issues that stemmed from some of the impacts of bullying. In this regard, I also did some rehearsal work with him in hypnosis on how to handle situations involving both bullies.

Both clients were also given powerful suggestions to increase their sense of control and empowerment, either at school or at work.

COMMENTS ON THERAPY APPLICATION

For both clients, the total length of intervention was quite brief. Both clients had experienced full symptom relief in fewer than six sessions, with the greatest reduction between the second and third session. For both clients, simply practising relaxation and knowing the cause of the problems more than halved the rate of hypnagogic hallucinations. Bob had had only two in the intervening week and Jack only two episodes again in total. This made the therapy work in terms of the actual hypnagogic hallucinations all that much easier.

For Jack, a single extra session led to a complete cessation of hypnagogic hallucinations; for Bob it took three sessions to reinforce the changes before he stoped having them. A year later neither had reported any relapse.

Clearly, the clients' intellectual disabilities did not interfere significantly with the interventions utilised and in fact may have made them more open to

suggestion, particularly in terms of lucid dreaming. Neither of them showed much resistance in terms of belief that it wasn't possible. Both were extremely open to the idea once it was explained to them, which alas in general is not always the case.

COMMENTS IN RETROSPECT

In retrospect, it would perhaps pay to be less reticent to use hypnosis with intellectually disabled clients. It might also have been useful to break the sessions up, as there was a lot of content to cover, especially for clients who have an intellectual disability. Nevertheless, both clients seemed to cope well with the content of the session even if recall was low.

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Spontaneous And Induced Abreaction

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It has been said by many researchers and clinicians that very occasionally they encounter a unique case in which fairly rare hypnotic phenomena are demonstrated. In this historical review, the differences between a spontaneous and an induced abreaction are articulated through the use of two different case studies. The first (spontaneous) was very uncharacteristic, as the patient had not verbalised, nor did she describe any content of the trauma in hypnotic and/or conscious state. This poses an interesting question about the validity of a concept of the "talking cure." The second case, of (induced) abreaction, demonstrates the potential of hypnotic techniques in the psychotherapeutic process and highlights the value of the therapist's acquaintance with particular theories of personality.

AN ABRIDGED REVIEW OF THE RELEVANT LITERATURE

Meares (1972) describes abreaction as "uninhibited expression of emotion" (p. 393). In a therapeutic setting, it is common in regression and is almost always present in revivification. The value of abreaction has been debated since Breuer and Freud (Freud, 1943; Tinterow, 1970) and like suggestive psychotherapy and cathartic methods, abreaction has "undeservedly fallen into disfavor" (Meares, 1972, p. 393).

Meares (1972) describes "signs of impending abreaction, emotional and ideational content of abreaction" (p. 394). He emphasises that spontaneous abreaction "is characteristic of the hypnotic state [and] may occur when hypnosis has been induced for some other purposes. The reason for the tendency to abreact is clear … in the light of *atavistic* theory of hypnosis … The mechanism which triggers off spontaneous abreaction is *the thought of some matter which is emotionally charged*" (p. 394).

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Induced abreaction facilitates the process of hypnoanalysis (Hlywa, 2004; Wolberg, 1948). In order to control the emotions, the patient should be kept in as deep a hypnotic trance as possible. Abreaction provides repressed, otherwise inaccessible, material for general psychotherapy, and tends to occur with age regression and/or with revivification. "The mechanism of abreaction which brings about the disclosure of suppressed and repressed material is simply a shattering of the patient's defenses ... To use abreaction effectively, we need to be able to initiate it, to control it and to terminate it at will." (Meares, 1972, pp. 396, 397). These conditions have been absent in the case of Heidi, described below.

Abreaction can rapidly change the depth of hypnotic trance, and may also cause a patient to emerge prematurely from the trance, thus leaving the patient confused as she becomes aware of highly traumatic material which she is not equipped to face. Abreaction can also have a profound effect on the rapport in the doctor–patient relationship (Hlywa, 1998).

Baker and Nash (2008) recognise the value of hypnosis in psychoanalytic approaches, pointing out, inter alia, that hypnosis can "soften defenses" (p. 440), support abreaction and master attention to difficult material; develop "safe, gratifying, dependable and facilitating emotional climate (p. 441); all of which are conditions for insight-oriented treatment. Abreaction, "in certain cases involving trauma, can prepare ground for interpretive work, by giving the patient a sense of conviction about the reality of a remote event which might otherwise remain vague and unavailable" (p. 448).

Wolberg, (1967, p. 176) points out that abreaction helps to discharge "strangulated emotions." Masserman (in Wolberg, 1965, p. 33) illustrates how Freud "commanded" his patients to tell him what was troubling them, when practising hypnosis, and thus provoked abreaction. "Abreaction, with its beneficial effect in bringing about a reliving and possible working out of the emotional aspects of a stressful experience, may be *spontaneous, suggested under hypnosis, or facilitated with barbiturates*" (Noyes & Kolb, 1963, p. 511).

Watkins and Barabasz (2008) provide an up-to-date review of abreaction, including the following salient points:

1. The therapeutic value of abreaction in psychoanalytical procedure is undeniable. "Abreactive techniques bring about emotional catharsis as a special form of release therapy" (p. 57).
2. "A single abreaction is almost always insufficient to bring about a permanent resolution of symptoms" (p. 58).

3. "Abreactions occur spontaneously to relive uncomfortable tensions [and they] must be followed by reassurance and interpretation if symptomatic release is to be permanent" (p. 59).
4. Abreaction has proven to be useful in PTSD and with "dissociative identity disorder," such as multiple personality (p. 62).
5. Abreactions may not be effective in treating neuroses that have developed over the years and are firmly entrenched through life.
6. Indications for abreactions are: "acute, rather than chronic conditions"; "specific symptoms … related to specific conflicts"; "sufficient ego strength" of a patient; "a therapist who is both willing and able to coexperience the traumatic event with the patient"; therapist's ability to face and to adequately manage abreaction is essential (p. 65).
7. When one starts abreaction one has to go with it until the patient is "fully released" (p. 67).
8. Use of the "affect bridge" in the induction of abreaction (pp. 72–82).
9. In the "corrective emotional experience," it is not enough for the patient to relive trauma and despair—he has to be "winner," and this requires appropriate presence of the therapist, which Helen Watkins calls "with-ness" (p. 83).
10. "Abreactive therapy can be somewhat dangerous, but it is a very powerful therapeutic technique. Surgery is dangerous as well" (p. 89).
11. Neglect by the professionals of abreactive procedures is the absence or the lack of reassurance, interpretation, integration and the absence of appropriate doctor's commitment in the therapeutic alliance ("we–ness"). Failure to repeat abreactions, to resolve trauma, and to strengthen the ego of the patient, are factors which must be avoided in a properly conducted therapeutic encounter (p. 93).

CASE STUDIES

CASE 1: HEIDI

A Polish-born, married, childless female patient in her mid-thirties, Heidi came to Australia as a refugee.

Background Information

Heidi had been a long-term patient of a general practitioner, a psychiatrist, a neurologist, and a gynaecologist. In her history, as supplied to me jointly by

the general practitioner and the psychiatrist, she had suffered from insomnia, depression, migraine, vaginism, and prescribed drug addictions (Sainsbury, 1976). All neurological investigations were negative, and gynaecological examination had proven to be impossible, thus confirming the diagnosis of vaginism (Kroger & Fezler, 1976). The psychiatrist, after prolonged treatment, had made no real progress, and hence the request for hypnosis. The general practitioner has been reprimanded by the Department of Health for allowing this patient to become addicted to sedatives, barbiturates, and finally to morphine and pethidine, which she required on a daily basis. Reluctantly, and only because of the very good relationship I had with the general practitioner, did I accept this difficult case.

Treatment Approach

My treatment approach at that time was what could be called "holistic," where the patient was seeking "self–understanding, authenticity and loyalty to oneself" (Hlywa, 2006), thus implying that with the restoration of psychological equilibrium, the individual should function normally and be free from inhibiting factors, including symptoms (Jacobi, 1974). With proper *insight* and capacity to *adhere to one's personal principles*, one does not need *defence mechanisms* (Rogers, 1951). My theoretical orientation at that time (1969) might be classed as eclectic, with a leaning toward "right" existential philosophy, and a reliance on hypnotic phenomena (van Kaam, 1966, 1969a, 1975).

I was made aware by the psychiatrist and the general practitioner, that the patient *understood* and *agreed* to be treated with hypnosis, and her time for the first session was two hours. I was also told that she was "very wary" of undergoing further "questioning," "analysis," "testing," and "interrogating." But I was shattered by her complete refusal to engage in any sort of a dialogue. When I even tried to speak with her in her native Polish, she answered only sufficiently to maintain a modicum of decorum. I had been trained that before implementing a therapeutic strategy, the therapist had to conduct a thorough anamnestic interview in a form of a dialogue (without formal questioning and without pencil and paper), which by virtue of a *catharsis* (and sometimes *insight*), could have some therapeutic and definite *diagnostic value* (Wolberg, 1967; Woody & Herr, 1965).

This patient's mind was impenetrable; the *dialogue was impossible*, and I thought that we, alas prematurely, had reached the end of the treatment. But suddenly, she pulled a lever in the reclining chair on which she was sitting,

rolled her eyes in to the midpoint of her forehead, and then I knew that she was in a hypnotic trance (Spiegel & Spiegel, 1978). When trying to estimate the depth of the trance, I suggested "automatic movement" of her right hand, which indicated a medium deep trance. Following this, by inducing auditory hallucination I confirmed that the patient was in the *somnambulistic* state (Hlywa 1998; Schneck, 1963).

Verbally, then, I reassured her, that she was in a *safe* and a *secure place*, that my only intention was that which was *identical with her profound desire*, and that *she had the capacity to achieve her goal*. I considered that it would be desirable to let her rest for a little while and become accustomed to "the state" of hypnosis before training her, and then use appropriate hypnoanalytic techniques (Bergin & Garfield, 1971; Brown & Fromm, 1986; Erickson, 1967; Schneck, 1970).

Suddenly her face became red and aggressive, her body intensely alert, her fist clinched, and then (in Polish) she repeatedly howled and screamed, "please, please … no, no, no," then started kicking, grinding her teeth and crying bitterly. I knew that she abreacted to a past traumatic experience, but I had no idea of the contents of her abreaction. I only hoped that she would stop abreacting before coming out of the trance, as she had spontaneously entered into self-hypnosis (Sacerdote, 1981).

She "awoke" from the trance several minutes before her time expired, looked around the room as if reorienting herself to the present time and place and gave me, for the first time, what could be described a "friendly look." I knew then that she was finally "with me," and the therapy could have a chance. To reorient her to the present time, I asked her (in English), "How are you? Do you have anything to discuss, to ask, or to tell me?" Her reply was short and final: "I am fine thank you; when should I come again?" She was quite surprised that her face was wet from tears, which she wiped and said, "I'm sorry!"

I became aware that I was dealing with a post-traumatic stress disorder (Brown & Fromm, 1986; Fromm et al., 1981), which should not only have a cognitive aspect of a traumatic experience (of which I was not aware), but an "insight," which, in order to be of therapeutic value, had to be integrated into "the personality matrix." I could also not ignore, *but respect* the fact that this patient (and only for some reasons known to her only) would not share with me her "secrets." The patient maintained this attitude for several weeks, with revivification becoming progressively less intense. But I was completely at a loss as to the contents of the trauma, and felt quite frustrated.

My mood was lifted by a cheerful telephone call from her general practitioner, informing me that Heidi had required no medication for several weeks. "Surely you must have done something good for her, to have stopped her addiction, and her migraine," he cheerfully assured me. After some dozen consultations, Heidi informed me on the phone that she was "well" and had no need to see me any more.

Following a period of 12 months, the general practitioner told me that she was pregnant, which suggested that "she was free from vaginismus and insomnia." To his knowledge, she had received no health professional attention from any sources other than my hypnotherapy. I had no knowledge of the genesis of her PTSD until her husband told me the story of her being raped by "several enemy soldiers."

Discussion

My psychotherapeutic encounter with Heidi obviously lacked even the basic necessary ingredients as mentioned above. The only information that I received from the psychiatrist and the general practitioner was that she suffered from "insomnia, migraine, vaginismus, and drug addiction." No further information was given relating to other areas of functioning, such as a personality assessment, information on personal and family history or psychiatric tests.

Her auto-hypnosis, although very unusual, is adequately explained by White (1941) cited by Lynn, Kirsh, and Hallquist (in Nash & Barnier, 2008, p. 114)—that "hypnotic behavior is meaningful, goal-directed striving, its most general goal being to behave like a hypnotised person as this is continuously defined by the operator and understood by the subject." McConkey (2008, p. 54) agrees that all hypnosis is self-hypnosis and the person behaves in the trance according to their understanding of the phenomena. In some way, his position supports my notion that Heidi's *spontaneous abreaction* could be explained by a frequently observed phenomenon where:

> The hypnotist is conveying his/her wish, and the subject must interpret these wishes in a way that makes sense and then behave accordingly. Thus individuals' interpretation of the communication of the hypnotist rather than the words themselves shape the responses that occur in the hypnotic setting …
>
> One truism that we too often forget is that it is what people hear, rather than what others say, that matters. A related truism in hypnosis is that it is the ability of the individual, rather than the 'power of the hypnotist', that leads to the hypnotic response. (McConkey, 2008, p. 54)

The patient's possible acquaintance with mesmeric (Mesmer, 1980) convulsions could also have prompted her to abreact. Her refusal to communicate with me verbally indicated that she felt shame and/or guilt, which she strictly guarded. Her spontaneous (and therefore completely unpolluted) abreaction was obviously effective, but lacking my interpretation and formal reintegration. May I add here that, for obvious reasons, I do not offer interpretations in hypnoanalytical procedures, but rely on the insight of a patient, thus avoiding a possibility of collision with the patient's trend of self-understanding and robbing her/him of developing self-reliance.

Carl Jung (in Jacobi, 1974) convincingly said that:

> The essential thing is that we should be able to stand up to our judgment of ourselves … If we can exercise self-criticism, criticism from outside will affect us only on the outside and not pierce to the heart …We come to realise that our own judgment has as much value, as the judgment of others. (p. 225)

I had generously offered Heidi unconditional acceptance, and full respect for her values and wishes; allowing her to deal with her own problems, thus encouraging affect while in abreaction. Her abreactive procedure satisfied five steps of Watkins' (1992) scheme for successful abreaction.

CASE 2: ELIZABETH

Elizabeth was a Sydney-born, 40-year-old lady who was happily married with four children, was healthy and of a pleasant disposition; she was referred to me by a psychiatrist expressly for "hypnosis." She was previously diagnosed and treated by ophthalmologists and a psychiatrist for "hysterical blindness."

Background Information

Following unproductive months of joint psychiatric and medical treatment, the psychiatrist decided that hypnosis was the only alternative, which should be tried, and tried *soon*, because of the real danger of atrophy of the optic nerves. Anamnestic interviews conducted by the psychiatrist, including relevant tests, were negative; however, Elizabeth was desperate following the unexplained and sudden loss of her sight. The husband, who brought her to me, begged me to help them as soon as possible, and assured me that he, his wife and their children would do anything to help her to regain her sight. Appreciating that all symptoms, especially severe with sudden appearance, must be treated with profound respect, and being warned that the patient was extremely weary with

"psychotherapy," I planned several strategies involving hypnosis, for which she was eagerly prepared and had great positive expectations (Watkins & Barabasz, 2008).

Treatment Approach

Due to Elizabeth's blindness, a modified tactile hand levitation method was used to induce hypnosis. The first session, which lasted more than two hours, was dedicated to deepening the trance, as well as teaching her to communicate with me by ideomotor signals and by automatic writing, but making sure that we avoided any topic that might have been connected to her traumatic experience.

In order to avoid possible disaster, I resolved that under no circumstances would I suggest prematurely, directly or indirectly, that she regained her sight. All symptoms, especially severe, must be treated with respect (Hlywa, 2004). Deep within me, I treasured my conviction that Elizabeth had a profound capacity (as she said in her prayers) that "with God's assistance," she would regain her precious gift and would be able to see her children, her husband, and the beautiful world (van Kaam, 1969b, 1975). Before taking her out of trance, I suggested that she would remain "faithful" in her belief about regaining her sight and would "unceasingly work" with me to a successful outcome.

During the second session, Elizabeth entered my consulting room without the gloomy looking face, but with an occasional smile, accompanied by her husband and her two beautiful children. I decided to prolong therapeutic sessions with her for as long I felt they were productive, and therefore her husband decided to return home with the children.

When embracing the children, Elizabeth remarked with a convincing voice: "He is good doctor—he is going to make me see!" These words had a tremendous impact on me as well as an obligation.

During this very long session, I tried out most of the hypnoanalytic techniques, including verbal dialogue, spontaneous and induced amnesia and control of the trance (Erickson, 1967; Wolberg, 1967). Before bringing her out of trance, I suggested to her "a very good night's sleep, profound interest, and appreciation of a real life, to which you will have excellent access, full confidence, and strength to overcome your impediment in fulfilling yourself."

During the next session, I commenced by posing a question as to whether there was anything in her mind that could contribute to, or shed some light on, her visual conditions. (Her answers had to be indicated by ideomotor signals, using the right-hand index finger for "yes," the left for "no," and the left hand for

"undecided.") Her positive answer in such a short time made me cautious, and I decided to ask her right hand to write the answer, which was—"death."

Issues relating to death, I thought, would have been thoroughly investigated by the psychiatrist, and certainly indicated to the psychiatrist by Elizabeth's husband and/or the family; therefore, I invited her "voice to confirm or to deny the answer"—and after a long pause, in trembling voice, she repeated the word, "death."

Death of somebody could have very drastic implications, especially, when guilt might be present. Therefore, I suggested that she would tell me a story "about a death, where it has nothing or very little to do with you." She started what was obviously the "story" of her family, saying that with four small children, she was very used to sickness, doctors, even hospitals, but she was very much concerned with the second youngest, Peter, who missed a lot of school. He was examined by many specialists and finally a hospital, where Elizabeth had to proceed in order to obtain a "final diagnosis." She was visibly anxious, and the resident doctor offered her assistance if needed. After verbalising her son's name, the doctor picked up his file, and while reading, looked at her with "sadness and concern," asking, "How is the boy?" At that time, the specialist walked in and cheerfully assured her that the boy is healthy, and could live to 100 years of age. Her face became red, eyes filled with tears and she howled, "Peter! I don't want to see Peter dying!"

I let her abreact fully. Following the abreaction, and still in the trance, I suggested she might like to repeat to me exactly the words of the specialist, which she repeated to me several times with obvious pleasure. I asked her to interpret them, and to make sure that she trusted the specialist. Then I asked her to recall carefully her interaction with the registrar, which she started to do with an obvious reluctance, considerable concern and emotional upset. I then asked her to confront the two conversations, which threw her into obvious confusion and reluctance to continue the treatment. The patient and I were both completely worn out by the emotional abreaction.

Before terminating this very long hypnotic session, I suggested that Elizabeth have a very pleasant and entertaining dream, which would come to her any time (in a safe and private place) when she started thinking about herself being in hypnotic trance. This was a precaution, so that she would not prematurely face her traumatic experience (Hlywa, 1998).

Following this session, I saw Elizabeth every second day, hoping that she would "spontaneously" gain the "insight" and her prayers would be answered; however, there were great difficulties (Jacobi, 1975). To her, her trauma (without the benefit of knowing Carl Rogers' personality matrix theory) was incomprehensible. Therefore, we spent a lot of time and effort to "pinpoint, to gain insight into her trauma" so that it could be integrated into her personality matrix, and thus enable her to enjoy the fruits of our labour.

Some seven weeks later, Elizabeth entered my office alone, hysterically crying: "I can see! I could see some light coming through windows! I opened the doors and could see the road … I could not stop myself from letting you know that I can see. O thank you sweet God!"

DISCUSSION

There were similarities and differences between the two cases.

Similarities between the two cases:

- Neither Heidi nor Elizabeth was a "characteristic" patient in an ordinary practice of clinical psychology.
- Both included psychosomatic implications and required an interdisciplinary coordinated approach.
- Both patients had had prolonged and unsuccessful treatments by psychiatrists, and thus felt reluctant to undergo further psychotherapeutic interventions.
- Both patients found new hope and expectations in a new treatment approach.
- Each patient possessed a profound capacity for deep hypnotic trance.
- Each patient had great support and encouragement from her *husband*.

Differences between the two cases:

- Heidi maintained exclusive emotional control in conscious behaviour through therapeutic contact, unlike Elizabeth who was eager to talk and was collaborative throughout the therapeutic encounter.
- Heidi maintained an absolute denial about engaging in any (verbal) dialogue, whereas Elizabeth was cooperative and eager to talk.
- Heidi was secretive of her lifestyle, including her traumatic experience, of which I had reason to believe she was aware. Elizabeth was completely open, encouraging her husband and children to participate in the treatment.

- Heidi's style, including timing of entering, abreacting and terminating hypnotic sessions, was absolutely unique, whereas Elizabeth, being a deep hypnotic subject, listened for instructions.
- Heidi's complete recovery from severe conditions was (in my experience) unprecedented; while conducting proper hypnoanalytical procedures with Elizabeth her recovery, albeit cautiously, was expected.

Heidi

I later found out from Heidi's husband that, at the end of the Second World War, she was raped by Russian soldiers. In my opinion, (a) she suffered from violation of her body (which in itself is a very traumatic experience, especially for a girl aged 15 years), and (b) felt guilty and ashamed because she (albeit unwillingly) participated with a man of an "inferior" race, which in accordance with her Nazi Polish upbringing was an immoral, deplorable and legally punishable act.

I considered that:

- My unconditional acceptance of her state, attitudes, wishes, likes, desires, ambitions, and her goals, coupled with my capacity to resonate with her (including her desire to maintain privacy about her intimate life), prompted her to enter spontaneous hypnotic trance and to abreact.
- I treated her as dignified human being with absolute rights, privileges and an obligation to make her own decisions.
- I completely abstained from offering her any suggestions, but accentuated that I was "with her" in her endeavour to get to know herself, and to implement her own "profound desires."
- Multiple abreactions, with flooded emotions, facilitated her capacity for a re-evaluation of her traumatic experience, and the capacity to find strength to decide and to engage in a realistically normal and rewarding life.
- Her move to Australia, thousand kilometres away from the traumatic place, played a certain symbolic role of being "far away" from the "painful space."

Elizabeth

Elizabeth came to me in an extreme shocking state, helpless, completely reliant on her husband's assistance and care, and worn out in a "hereto losing battle." She was willing to speak, but she had no idea where to start, and having answered psychiatrists' questions several times over, she was at a loss about what to talk about. Hypnosis was something mystical to her, and carried with

it some hope. She was somnambulistic, and following the first session she established with me an excellent rapport.

Raised by Catholic parents, she treasured and practised her religion, and with unceasing faith, prayed for the return of the gift of vision (Jung, 1958; van Kaam, 1969b). In spite of her profound cooperation in the therapeutic endeavour, and the skill and experience of the psychiatrists in Freudian analysis, Elizabeth's extremely disabling symptoms remained firmly entrenched. Anamnestic interviews with the psychiatrist had not indicated where to look for the genesis of trauma. Our assistance in breaking the "impasse" came from Rogers (1951), where he says:

> Behavior may, in some instances, be brought about by organic experiences and needs *which have not been symbolised*. Such behavior may be inconsistent with the structure of the self, but in such instances the behavior is not "owned" by the individual … In moments of great danger or other emergency stress, the individual may behave with efficiency and ingenuity to meet the needs for safety or whatever other needs exist, *but without ever bringing such situation, or the behavior called for, to conscious symbolisation* … Psychological maladjustment exists, when the organism *denies* to awareness significant sensory and visceral experiences. (pp. 509, 510, emphasis added)

Very careful *with-ness* and *resonance* with Elizabeth indicated to us that a genesis of her blindness was in the unbearable pain of "seeing Peter dying." She therefore *lost her sight!*

It was her insight, acquired in the revivification process, where she was repeatedly asked to re-evaluate and to confront the contents of the information obtained from the registrar and the specialist in the hospital, that helped her to regain her sight. Whereas the "grim faced and very much concerned registrar going through several queries of diagnosis," deeply impressed her with the severity of Peter's conditions (inadvertent iatrogenia), the specialist greeted her cheerfully with good news—"the boy is healthy"! She left the hospital with "twilight"; the frightening message inadvertently conveyed to her by the registrar, was *not consciously* accepted by her, but the defence mechanism did the "job," and by rendering her blind protected her from the unbearable—"seeing Peter dying."

SUMMARY

The above cases strongly suggest that hypnosis plays a very important role in psychotherapeutic processes (Ford & Urban, 1965; Watkins and Barabasz, 2008). Very prominent and experienced psychiatrists, having at heart the

wellbeing of the patients, and appreciating that they had reached an "impasse," justly requested a hypnotic intervention. The phenomenon of abreaction (including its nature, appearance and usefulness) deserves much more attention from clinicians. For obvious reasons, "demonstration" and study of abreaction in laboratory conditions appears to be impractical.

Clinicians, apparently for "safety reasons," prefer to implement "the pleasant side of hypnosis"—relaxed, enjoying, satisfying state (rather than "pro-active" and emotionally intense) which undoubtedly have therapeutic use, as in cases including inadequate "ego" strength and the supportive stage of therapy. The spontaneous process of abreaction, if thoroughly investigated in formal therapeutic and in "normal" and "real life" situations, has the potential to be much more generously included in formal therapeutic sessions. I also believe that for abreaction to be effective, the affective experience and process must be prompted from the within patient's psyche and not inferred by external interventions, including those of the therapist.

After many decades of reflection, my exhortation is: Let us grant people who come for psychotherapy (not counselling)—by providing them with unconditional acceptance and dignity—the chance to fully experience their human "rights" to learn to feel, think, value and decide for themselves.

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SCRIPTS

EMPOWERING THE CLIENT

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The verses in this script, or the script as a whole, can be used for induction, deepening, ego-strengthening, and resource-building. The ego-strengthening and resource-building suggestions are particularly useful with clients who have specific goals in mind, changes they wish to make, and behaviours they want to modify.

The emphasis on breath reflects the ease in which clients can use a natural approach to enter into trance, and in addition offers an elegant induction for teaching self-hypnosis. The instruction to begin "watching" the breath, as opposed to hearing or feeling it, is intended to bring the client's awareness to the breath in a different way, thus presenting a slight challenge as well as speaking to the visual or right brain.

… and as you watch the breathing, you'll be curious about the space between the breaths … that pause right there … maybe you notice that space, that tiny pause, at the bottom of the exhale … before the next inhale … it happens on its own … without you having to do anything at all … and it's nice to just observe how that happens … such a natural part of how the breath flows …

[Time is observed to suggest more directly that the trance will deepen and that the client may notice that.]

… you can enjoy moving a bit deeper now … deeper than you were a second ago … not as deep as you will be seconds from now …

[Suggestions about remembering one's internal resources are open and indirect, attached to a suggestion that one will connect to his or her power

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and confidence via such memories. Confidence and power are then linked to making changes.]

… I wonder how curious you will be about how you will move toward changing these behaviours that have caused you discomfort … and as you consider that now … you'll notice some of your internal resources … in whatever way you like to notice them … and as you do that … you can observe how those resources remind you of your confidence and power … in whatever way you like to remember … and how confidence and power support your efforts to build on changes that you will be making …

[Time and memory are used to frame early learnings and one's capacity to learn and to know. These suggestions are inspired by Erickson's frequent use of early learnings set to engender confidence and ego strength; remembering what one has learnt suggests that one can continue to learn … learning is change. The blank spaces reflect customising the client's desired outcome, or what he or she desires to change.]

… won't it be nice to take some time right now … a short time that feels like a long time … to remember learning some things that you didn't know how to do and you learnt how to do them … and maybe you'll find it interesting to wonder about how you'll always know how to do those things because it really is true isn't it, that once we take the training wheels off, we don't have to put them back on … because we already know what to do … so you'll really like that you can remind yourself in some way every day of your capacity to learn and know things … and that will of course help you to _____ … because of course you've learnt so many things … so you can learn _____ too …

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Short Script: Emphasising Safety and Security

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This script was designed for a 42-year-old woman who was feeling extremely stressed with too many demands in her life. The normal hypnosis protocols were adhered to and the hypnosis session was part of an overall session of therapy for this client, who had had attended therapy for two previous sessions of CBT. This script was part of an overall session in which other relaxation techniques had been introduced.

Make yourself comfortable in your chair … just rest your arms where they feel comfortable … place your feet on the floor … know that if anything occurs in your environment that needs your immediate attention … you will awaken immediately, feeling alert and able to deal with it … know that when you are ready, all you have to do is count to 10 and you will awaken feeling safe and secure … now sit back and relax … close your eyes and feel the tension in your body streaming out of your feet … picture it just flowing out of your body … first from your feet … then your legs … just sliding out and trickling away … now from your abdomen … just running down freely through your legs and feet and out of your body … as it flows away, feel your body becoming more relaxed … safer … and more secure … the tension just flowing out of your body … down your arms and out of your fingers … and feel yourself being more relaxed … safe and secure … and as the tension flows out … be aware of your breathing … slower and deeper … as the tension just moves away … slower and deeper … moving away from your head and face … down your neck and arms … through your hands … and out along your fingers … as you relax … your breathing becomes slower and deeper … slower and deeper … all the while your eyelids becoming heavier and heavier … heavier and heavier …

And as the tension flows out of your body you can count silently backwards from 200 … as you count, picture yourself walking down the path to your comfortable, safe, secure place … safe and secure … climbing safely down a set of stairs … as you step on each one … picture yourself going deeper and deeper … deeper and deeper … feeling

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safe and secure … at the bottom of the stairs is your safety and security … your inner boundaries … and as you climb further and further down to your safety and security … picture yourself constructing permeable walls around yourself … walls that keep you safe and secure … permeable walls … that only allow you to let in those things that make you feel safe and secure … permeable walls that you can take down or reconstruct whenever you want to … picture yourself now … safe and secure … enclosed by your permeable walls … walls that allow you to decide what you will let in … walls that enable you to put a secure barrier between you and the things that you have to check to decide whether they feel safe and secure …

Rest a while … admire those strong but permeable walls that keep you safe and secure … knowing that you have the ability to decide what you will let though those walls … knowing that you decide when you feel safe and secure … when you are ready … when you feel like you want to … count to 10 … open your eyes … feeling safe and secure … awake and alert …

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SHORT SCRIPT: STOP SMOKING

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This script is one of several utilised in quit-smoking sessions with clients. This is one of the shorter scripts which can be used with cognitive behavioural therapy in the first session. The quit-smoking program is conducted over a minimum of three sessions and a maximum of six sessions.

Just sit back … focus on the spot on the wall … and let your thoughts run free … just relax and focus on the spot … and as you relax … your eyelids become heavier … and heavier … and as you relax … you are aware that your breathing is becoming deeper … and deeper … slower … and slower … you are having difficulty keeping your eyes open … your eyelids becoming heavier and heavier … you feel a calmness of body and mind … and as you relax, you … are at peace … with a sense of so much time … time to breathe that fresh air … deeper and deeper … and as you breathe that fresh air … deeper and deeper … filling your body with a new vitality … feel how good it is to be a non-smoker … see those beautiful flowers in the garden … feel how good it is to be able to smell the fresh air … take a long … slow … smell of those flowers in the garden … rejoice in your ability to now be able to smell clearly … take a deep breath … deeper and deeper … and as you breathe … deeper … and deeper … you begin to see everything as if it's fresh … and new … the new … healthy … you … your body and mind clear … and clean … and healthy … you see the new you … a healthy … non-smoking you … able to be fully alive … able to enjoy your clean … clear life … with every breath you take … feel the urge to smoke just drift away … remember when every step you climbed was such an effort … leaving you breathless … now enjoy climbing those stairs … as a non-smoker … and with every step you take … feel that clean … fresh air … filling every fibre of your being … making you feel alive … more alive … and able to enjoy living your life to the fullest … now climb back down those stairs … and with every step you take … you will say … I'm a non-smoker … feel how good it is to be happy and healthy … full of vitality … and able to live my life to

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the fullest … and as you climb back down those stairs … feel yourself becoming more and more awake … more and more alive … and when you have reached the bottom of those stairs … pause for a moment … and when you are ready … feeling awake and alert … open your eyes.

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Short Script: Letting go of Stress

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This script was designed to meet the needs of clients who feel in need of some sort of relaxation intervention, but tend to raise this need only near the end of their first session.

Make yourself comfortable in your chair … just rest your arms where they feel comfortable … place your feet on the floor … know that if anything occurs in your environment that needs your immediate attention … you will awaken immediately, feeling alert and able to deal with it … know that when you are ready all you have to do is count to 10 and you will awaken feeling rested and relaxed … focus your eyes on the spot on the ceiling above you … feel yourself relaxing … breathing slower and slower … deeper and deeper … your eyelids becoming heavier and heavier … when you feel relaxed … and can't keep your eyelids open … close them gently … picture yourself in a happy, relaxing place … just let your thoughts drift … perhaps look around your happy place … the place that makes you feel so serene … maybe it's a deserted beach … or maybe it's a garden … or maybe you are floating on a cloud … or soaring like a bird on a breeze … deeper and deeper into your happy place … just let the quiet relax you … just let your cares drift away … listen to the silence … just relaxing in your happy place … knowing that you don't have any cares … all that matters is enjoying your quiet time … so serene … so peaceful … accept the freedom of your carefree quiet time … just relax and enjoy … feeling comfortable in the knowledge that you always have peace and quiet in your happy place … know that whenever you need to have a break … you can relax and take yourself off to your happy place … just relax and enjoy … when you are ready … count slowly to 10 … gently open your eyes … feeling awake and relaxed …

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Reviews

Healing With Stories: Your Casebook Collection for Using Therapeutic Metaphors

George W. Burns

Hoboken, NJ: John Wiley & Sons. 2007. xviii + 277 pp. US$50

This is indeed another unique book brought to us by Australian George Burns, the man with the magical touch, a shaman's healing stories and an unconscious mind that has delved deep into our archetypal worlds. This five part book contains 20 chapters written by authors well known in Australia in the area of metaphors, Eriksonian hypnosis and NLP: Carol Hicks-Langton, Rob McNeilly, Michael Yapko, and Rubin Battino. The themes of the book parts are: improving mood, building positive relationships, changing patterns of behaviour, enhancing health and wellbeing, and developing life skills. Part One contains chapters on the healing of depression, emptying sadness, treating childhood separation concerns, and dealing with anxiety. Part Two covers empowering decision making, modelling outcomes, transcending abusive relationships and coping with parental divorce. Part Three includes chapters on narrative therapy, merging therapist and client metaphors, changing global lifestyles, and using multiple embedded metaphors in goal-oriented therapy. In Part Four, writers tell us how to treasure children's own stories, alleviate night terrors, de-energise self-mutilation, and add magic to paediatric care. The final three chapters in Part Five revolve around using client-based cultural stories in trauma, joining the client's world with CBT and metaphors, and engaging metaphor to deal with a disruptive client.

> Each author tells the reader about the case and how they went about the assessment of the client's needs; they underscore the resources/strengths/skills of the client in the story/metaphor, after they have determined what the story needs to do for the client. They explain to us why they choose one particular story/metaphor intervention, rather than another type of intervention and tell us how they go about constructing the story. They then nominate the story or metaphor they use and what they learned from the case, as well as the outcome for the client.

This is a book for therapists who like to utilise yarns, fables, folklore, metaphors, media, art and imagination and weave them into their psychotherapy sessions. The stories can be integrated within hypnotic sessions or simply told to a client with a storyteller's voice and presentation style. This is not only a book about conceptualising metaphors; it's a teaching book whether you are new to the area or you simply (if you let your unconscious mind do it for you) want to hone your skills or stretch your boundaries some more; for either need, this is a great way to go about it.

On page 140, Battino reminds us to elicit the client's own story and gives us a seven-step procedure to assist them to change their story and their life. As Burns says, practitioners work with "metaphors from theoretically very divergent backgrounds, in divergent ways, and with divergent caseloads." Now, if that last statement has not moved you into an altered state of consciousness, then some of the stories will.

There are always personal favourites, of course, and my interest with a new grandchild went to the little pigs' story (who stayed home). And then there is Puff (who is not acting much like a magic dragon) who enters the picture; here George Burns has to call up the magic of another favourite from childhood — Tinkerbell — who does her best work in being optimistic and planning for the future.

It was also good to see the name of David Axten recognised on page 119 by Christine Perry, after his recent retirement from decades of coaching and supervising counselling students; he always had a story to tell. Perry reminds us that a person's worldview has a positive relationship to their preference for counselling approaches and cites Ferrra's finding that it is common to hear from a client an average of three metaphors per 100 words in just one hour of therapy.

A mountain story reminds me of colleague Glen Guy's stories of his trekking up some of the tallest mountains in the world, when he was not scaling bureaucratic peaks to ensure that his students achieved the very best exposure to narrative therapy in the country, if not the world. I found the generating act-consistent metaphors instructive and decided to pursue the concept of acceptance and commitment therapy after reading this chapter. The next chapter, written by Gregory Smit on trekking to happiness, will just have to find its way to Glen now that he is into exploring the valleys and plains, rather than the peaks and uphill climbs. Smit explains that he is offering more than a metaphor to clients, as he guides them to learn from experience, and in this case example the focus is on retrieving one's own inner resources and

taking different perspectives.

When you are reading Richard Kopp's chapter, go to Figure 3.1 first, as it is highly instructive: Kopp outlines three phases from moving from the general to the personal, then moving from facts to feelings, and then exploring and transforming the clients' metaphors. I wish someone would do that for me — change my metaphors I mean; it always seems much easier to solve other people's problems and to help them change their lives and feel better about life than to tackle one's own issues. Kopp also outlines how to select a metaphor and then gives us the Empty Sadness case example as an exemplar.

Joy Nel reminds us that "children are the owners of their stories and lives, and the therapist is only the scribe." As she works through the story of Jamé, who is struggling with her parents' divorce, Joy deconstructs the discourses and constructs a counterplot, and later Jamé draws two snakes (hope they weren't Eastern or King Browns) and they have a fight (Jamé's drawings of the snakes can be found on pages 108/109), with the final outcome being that Jamé finds a wealth of inner resources through the constructive use of the metaphors and a structured therapy approach. Stories on their own are just that — good stories, but stories within structured therapy are tools of magic.

When you have a copy of the book in your hands, turn to page 243 and see what happens when you look at the figure of the cross and circle. Nothing happened at all for me; so if there is some neurologist out there who can tell me what this means, I would be interested to hear from them. However, as a researcher I must admit that without knowing the correct instructions about the location of the cross and circle and how far away to hold the picture, etc., the experiment is bound to have unexpected results like that. But just as the man who was selling carpets at Expo one year said to my young five-year-old son, who was into magic: "If you get your father to buy one of these carpets, I will make it fly!" If you make the circle disappear, then anything magical can happen — a convincer by any other name.

Joyce Mills could perhaps work with my figbird. I have hand-raised two orphan figbirds and the first one flew off high and proud (comes back to say hello occasionally) and the other is still here 18 months later, looking at me inquisitively, but won't fly more than three feet off the ground. Mills reminds her client that you have to walk before you can fly (Figgy probably thinks she is human and is waiting to walk, so then she can fly.) So 11-year-old Joey emerges from his cocoon just like a butterfly, as he meanders through the story of the Caterpillar Woman. Joyce outlines the four stages of (i) creating a safe

environment, (ii) crawling before flying, (iii) cocooning for greatest change, and (iv) emerging in a new transformed state.

Ever been scared speechless? Well Carol Hicks-Langton gives us entree into the world of a 51-year-old woman, with a very traumatic past, who can finally express herself through poetry. Carol gives us the Walking a Guided Path metaphor that assists clients find their own resources' strengths and skills. From pages 156 to 161, Carol splits the pages into two columns, with the stories on the left column and the critique on the right; this allows the reader to analyse the metaphor from start to finish. This is a very useful technique for both beginners and more advanced practitioners, as it allows us to reflect on what is going on, to monitor the story from the intention of the therapeutic goals, and to show us the relevance of the sections of the metaphor.

Wendel Ray and Jana Sutton deal with trauma in a case of date rape, and subsequent self-mutilation, sex life difficulties, and marriage intimacy problems. The authors advise that metaphorical relationships permit therapist to avoid problem- or disease-based language in the healing process. "Solutions can be found without our tampering with their being, personalities characteristics, or whatever else they hold dear" (p. 188).

Roxanna Erickson Klein brings us the story of eight-year-old Violeta, who had been at death's door in a hospice setting but who manages to gain another two years of life to spend with her family. One of the lessons in this story for all of us is about appreciating little moments of joy. Roxanna shows how she manages to give Violeta more control over her life through stories — stories that had happy and not so happy endings; Violeta herself created other stories or other plots and started to learn to read and write. Interestingly, Roxanna tells us her own story as a therapist in this chapter, whether or not she intended to do so, and thus we learn about cultural sensitivities, family versus health care needs, and the issue of confronting parents about preparing for death and separation from a loved one. Tweety, a parakeet, comes to the rescue and, of course, is rescued himself. When Tweety gets sick, Violeta's job is to care for him and to think about burial plots if he were to die — being "prepared for the worst while hoping for the best" (p. 207). When young Violeta finally dies, it is at home with her family and with Tweety close by.

They are not all sad stories: George Burns shows us how to use kids' own stories, with Peter Pasta, and a Scareless Ghost. To sum up, this is an excellent book for new and advanced therapists; it is another one of George's books that you will have to order for your own shelves, as I won't be lending mine.

(This review was first published under the heading 'Not Just Another Story About Metaphors' in the August 2008 issue of *Psychotherapy in Australia* and is reproduced here with the permission of the editor.)

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Scientific Program Abstracts of the Australian Society of Hypnosis Congress, Norfolk Island, September–October 2008

Scientific Addresses

Using Hypnosis to Model Delusions and Confabulations
Amanda J. Barnier, Macquarie University, Sydney
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Hypnosis has a long history of utility. Clinicians use hypnosis to treat a myriad of conditions and researchers use it to explore fundamental processes of human information processing. But some particularly interesting uses have come from partnerships between clinicians and researchers in instrumental hypnosis. To illustrate, I will describe a recent collaboration between hypnosis researchers and cognitive and clinical neuropsychologists, which focuses on delusions and confabulations. Although both conditions involve distortions of reality, they are considered distinct pathologies, demanding different explanations and treatments. Our colleagues, Langdon and Coltheart, recently and controversially proposed that both delusions and confabulations can be understood within a common explanatory framework: the two-factor theory (which identifies two specific disruptions in normal information processing). But this has yet to be tested because there is no proven way to reliably create and study delusions and confabulations in the laboratory. Hypnosis provides a way, and I will describe the steps we are taking to recreate these clinical conditions in the laboratory and to test the two-factor theory of delusions and its extension to confabulations. I will highlight the value of hypnosis and the value of collaborating across the clinic and the lab.

Hypnosis Absorption and Rapport From the Perspective of Social, Affective, and Cognitive Neuroscience
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Neuroscientific findings from studies utilising hypnosis will be located within the growing knowledge of functionally distinct and mutually inhibitory neural networks mediating internal and external self-regulation. Tellegen's revised concept of "absorption" is presented as an essential bridge between functional and neuroscientific accounts of hypnosis. Rapport is a key concept in the clinical practice of hypnosis which has largely eluded experimental researchers. Developments in social and affective neuroscience will be employed to reassess the nature of rapport as it occurs in the hypnotic setting.

Papers

Hypnosis and Delusions: Defining the Elusive Second Factor

Michael Connors, Amanda J. Barnier, and Robyn A. Langdon, Macquarie University, Sydney
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In 1961, Sutcliffe described the hypnotised person as essentially deluded. Since hypnosis and delusions share many features, researchers have used hypnosis "instrumentally" to create and study delusions in the laboratory. Perhaps the most influential current theory of delusions is Langdon and Coltheart's two-factor model, which posits that both a neuropsychological anomaly (Factor 1) and impairment in belief evaluation (Factor 2) are necessary for delusion to occur. Although there is much support for this model, the exact nature of Factor 2—the factor thought to be common to all or most delusions—remains relatively unspecified. My research seeks to model with hypnosis, and thus clarify, the specific processes involved in delusion, especially Factor 2. In this paper I describe my research project and its current findings, as well as consider possible clinical implications.

A Hypnotic Analogue of Mirrored-Self Misidentification

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Mirrored-self misidentification is the delusional belief that "the person I see when I look in the mirror is a stranger, not me." The complexities associated with delusions have made them quite difficult to examine in the laboratory. However, in this study I used hypnosis to create temporary, reversible delusions of mirrored-self misidentification. I gave 12 high hypnotisable participants a suggestion to see either: (a) a stranger in the mirror, (b) the mirror as a window, or (c) the mirror as a window with a view of a stranger on the other

side. Not only did participants report seeing a stranger when they looked in the mirror, they described physical differences between the stranger and themselves, looked around the room to find the stranger, and maintained their delusion when challenged. I discuss these findings in terms of a current theory of delusional belief, and the value of hypnosis as a model of delusions.

Examining Associations Between Susceptibility to Optical Illusions and Correlates of Hypnotisability

Kathryn Gow, Mirela Habota, and Joseph Wagner, Queensland University of Technology, Brisbane, and Peter Grimbeek, Griffith University, Brisbane
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An association between susceptibility to illusion and to hypnosis was suggested by Erickson and Erickson as far back as 1938, when they successfully evoked negative colour aftereffects following an induction of hallucinatory colour in highly hypnotised subjects. Four out of five participants perceived negative aftereffect to the suggested colour, thus indicating a link between optical illusions and hypnotisability. Although links have been found between susceptibility to illusion and hypnotisability, considerable limitations exist in the research methodologies previously used. Additional studies have tried to correct this methodology by an inclusion of contingent aftereffects as a measure of illusion, combined with two scales of hypnotisability, but this has led to conflicting results. This paper reports on the third and final study which attempted to correct the methodological procedures previously used in the QUT studies and illustrates the relationship between hypnotisability and optical illusions, particularly the McCollough effect.

Relationships Between Dissociation, Fantasy Proneness, Absorption and the PCI

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Hypnotisability, a personality trait measuring how easily a person is hypnotised, has previously been shown to correlate with other personality traits, such as dissociation, absorption, and fantasy proneness. The aim of the present paper is to report on the relationships between the Phenomenology of Consciousness Inventory (PCI) and three scales that are said to be correlates of hypnotisability—the Modified Tellegen Absorption scale (MODTAS), the Dissociative Experiences Scale II (DES-II), and the Inventory of Childhood Memories and Imagining (ICMI). Further analyses were undertaken on the

subscales and factors of the PCI and their relationships with the three other scales. The study included 101 participants, who filled out three scales, while 42 participants completed the PCI. It was revealed that the MODTAS, the DES-II and the ICMI all significantly correlated with each other, while the correlations with the PCI varied according to the actual subscales in focus.

The Effects of Awake-Suggestion on Pain During Intravenous Injection of Propofol: A Pilot Observational Study

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It seems that negative suggestions during intravenous induction of anaesthesia with propofol are likely to increase patient responses to pain. In our study, randomly assigned patients awaiting elective diagnostic and/or therapeutic procedures received a communication immediately prior to, and during, IV injection of propofol. These consisted of either a negative suggestion of a warning of "strong pain" (NS) or a positive suggestion of a "warm strong pressure sensation" (PS). Scoring of pain response was by observation of patient facial expressions, vocalisation, and limb rubbing or withdrawal. We found that 20/29 patients (69%) in the NS group appeared to experience pain on injection of propofol. Only 7/28 patients (25%) in the PS group appeared to experience pain. These differences were statistically significant ($p < 0.01$).

Can Hypnosis Turn off Reading? Investigating Hypnotic Modulation of the Stroop Effect

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Reading words is widely considered to be automatic; once learned, skilled readers supposedly cannot help but process words. However, recent findings have suggested that a simple hypnotic instruction can stop hypnotised people from reading. Such effects imply that hypnosis can powerfully influence cognitive processing. I describe a program of research that used the classic Stroop paradigm to investigate whether hypnosis can produce extraordinary alterations in high hypnotisable individuals' reading experiences (i.e., "I can't read the word") as well as in their reading processing (i.e., modulated or eliminated Stroop effect). Although my experiments overwhelmingly indicated that hypnotic suggestions altered only highs' reading experiences,

there was a small subset who also demonstrated altered processing. I focus in particular on the strategies and experiences of this subset of highs to consider claims that hypnosis fundamentally alters the way in which people process information.

Whose Hand is That? Changes in Agency and Self-Awareness in Hypnosis

Vince Polito, Amanda J. Barnier, and Robyn A. Langdon, Macquarie University, Sydney
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Agency, the subjective experience that our conscious intentions cause our actions, is a key issue in psychology, philosophy, and neuroscience. It is clear that under certain conditions a person's subjective sense of agency can be dramatically inconsistent with their objective actions. An example of this is anarchic hand syndrome, a clinical condition in which a patient's arm makes unintended actions outside of their control. The cause and underlying processes by which such changes in agency occur are poorly understood. In this paper I describe my use of hypnosis, which also involves shifts in participants' sense of agency, to develop an analogue of anarchic hand syndrome. I gave participants a suggestion that the movements of their arm were outside of their control and then asked them to tickle themselves. I compared participants' ratings of ticklishness and judgments of the source of the tickling with baseline measures in which, before hypnosis, participants tickled themselves or the hypnotist tickled them. I discuss the results and implications of this task for understanding agentive shifts within hypnosis.

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2. Manuscripts (pp. 283–320), not usually to exceed 4500 words, should be typed clearly on quarto or A4 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.

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