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HYPNOSIS IN THE TREATMENT OF OBSESSIVE- COMPULSIVE DISORDER

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Obsessive-compulsive disorder (OCD) is a common disorder affecting approximately 2% of the population. Typical treatment regimes are of a cognitive-behavioural and/or pharmacological nature with limited reference in the literature to the use of hypnosis in the treatment of OCD. This case study reports the successful utilisation of hypnosis in conjunction with the other therapies: it illustrates many aspects of OCD common to phobic disorders, and it highlights one increasing concern for OCD sufferers — AIDS contamination.

The *Diagnostic and Statistical Manual of Mental Disorders — Revised* (DSM-III-R; American Psychiatric Association, 1986) classifies obsessive-compulsive disorder (OCD) as a specific subclass of anxiety disorders. The obsessions are recurrent and persistent ideas, thoughts, impulses, or images that are experienced as intrusive and senseless, while the compulsions are repetitive, purposeful, and intentional behaviours that are performed in response to an obsession, or according to certain rules, or in a stereotyped fashion (DSM-III-R). Findings of the National Epidemiology Catchment Area Survey have shown that OCD is about twice as prevalent in the general population as is panic disorder; that it has a six-month point prevalence of 1-2% (Myers, Weissman & Tischler, 1984) and a lifetime prevalence of 2-3% (Robins, Helzer, & Weissman, 1984). As in phobic disorders, the obsessions and compulsions exhibited by sufferers reflect a disproportionate response to an imagined or exaggerated threat associated with a specific object, idea, or situation (Frankel, 1980). Marks (1987) pointed out that obsessions resemble phobias in three ways:

1. As with phobics, the relevant evoking stimuli (ES) often induce *anxiety*, which in OCS [obsessive-compulsive sufferers] leads to obsessions and rituals. In both syndromes sufferers may fear *harm* from contact with the ES.

2. Both phobics and OCS *avoid* or escape from their ES, and OC avoidance can be extensive.
3. Both phobic and OC syndromes respond well to *exposure treatment*. It persuades patients to re-enter hitherto avoided situations and to remain in them until ensuing discomfort subsides. (p. 441)

Wolpe (1973) reported successful programs of desensitisation to phobic stimuli using mental rehearsal, and this concept has been extended to Guided Affective Imagery (Klinger, 1988) and hypnosis (Frankel, 1980). In fact, Frankel wrote that hysterical disorders, dissociative and obsessive states, and phobic disorders have been solidly woven into the history of hypnosis since the latter part of the nineteenth century.

Habeck and Sheikh (1984), in considering the different forms of therapeutic help for the phobic patient, have affirmed that "imagery" has progressively supplanted verbal, diagnostic, and therapeutic procedures in the treatment of phobic disorders. Should the therapist wish to create automatic, affective responses within patients, mental pictures of the phobic stimuli prove equally as effective as the real phobic objects (May & Johnson, 1979). Fromm (1987) went so far as to say that only if hypnosis incorporating systematic desensitisation, visualisation, and imagery or, alternatively, cognitive restructuring (which can also be achieved with hypnosis) failed, need psychodynamic methods be employed to treat phobias.

A search of *Psychological Abstracts* (January 1974–June 1990) revealed only five references to OCD, none of which related to hypnosis as a treatment modality, while a "Medline" search provided two examples of the use of hypnosis in OCD (Johnson & Hallenbeck, 1985; Scrignar, 1981). Despite the paucity of reports in the literature, it seemed apparent that the principles of cognitive restructuring, reality testing, ego-strengthening, thought-stopping, distraction, and exposure could be successfully achieved not just *in vivo* but also in the hypnotic trance with obsessive-compulsive patients. Despite frequent therapist claims that OCD patients generally will not agree to the use of hypnosis due to issues of control, it was decided to discuss this concept with an OCD patient who had been referred by a psychiatrist (the second author) for cognitive-behavioural treatment.

The case of "Judy" is presented in some detail as an illustration of the combined use of hypnosis, cognitive-behavioural psychotherapy, and medication with an OCD patient to enable other clinicians to analyse this approach.

CASE STUDY

Judy, a 26-year-old married secretary, described her main complaint as being an obsessive-compulsive disorder focused around the fear of contracting AIDS and the possibility of passing it on to others. She stated that her problems started about four years earlier, coinciding with the commencement of her

nursing training at a large city hospital, and began with checking. For example, Judy would take a pulse three or four times to make sure that she had "done it properly" and she constantly worried whether she had done something wrong that might hurt one of her patients. A fear of contamination from patients' body fluids followed, especially the fear of contracting AIDS, and this fear was manifested by hand-washing, fear of shoes (i.e., they had been on the ground and might have touched "something"), and excessive changing and washing of her clothes. Judy stated that her compulsive hand-washing and cleaning were exacerbated after the admission to her ward of a known AIDS sufferer. She asked the charge sister what precautions were to be implemented and was told: "There is no protocol but I'd be careful if I were you." Gowning, gloving, and excessive washing followed.

Two years later, prior to getting married, Judy had a brief sexual relationship with a man she later discovered was bisexual. The implied threat of AIDS caused her great and not unreasonable distress and she consulted the hospital staff doctor who ordered an AIDS test which, at Judy's insistence, was repeated some five months later. Both results were negative. She now wondered if she could have an AIDS test each time she came in contact, or perceived contact, with something or someone which might be AIDS-contaminated. This concern appears to be prevalent amongst certain professionals such as nurses, doctors, police, and ambulance drivers (Burrows et al., 1989).

Her fears continued to fluctuate until a year prior to referral, when they became very much worse and Judy sought treatment. She reported some success with a behaviour-modification program which focused on timing showers and hand-washing but her fears and hand-washing had become such an increased problem that she left nursing. Judy's general medical practitioner also commenced her on clomipramine (Anafranil) (100 mg tds) at about that time. She was able to complete a two-month secretarial course, obtained a job, and after six months of drug therapy she felt somewhat improved and she ceased her medication.

She stated that she had coped reasonably well until one month before, when her symptoms returned after she saw a condom in the street. The symptoms were manifested by increased hand-washing, fear of walking from her car to the office (in case she stepped on "something" or her shoes came off), and fear of contamination from those shoes when she got home. Consequently, she left her shoes on the front veranda each evening. These fears were also present when she went out with her husband on weekends, but he was usually able to reassure her that she had not stepped on anything. Judy also had problems walking amongst or past "unsavoury-looking" people, by which she meant people who looked dirty or untidy. The thought of coming in contact with someone else's blood, either real or perceived, was also highly distressful. All these events were perceived as possibly contaminating her, and Judy then had to go through cleaning rituals, both to rid herself of "contamination" and to avoid passing it on to others.

These doubts and rituals interfered with Judy's social and work life, as they took considerable time to implement and were a source of great anxiety. There was no history of sleep or appetite disturbance but Judy did report a decrease in libido which could be a side-effect of the Anafranil re-prescribed by the second author at initial interview four weeks ago. Other possible drug alternatives, such as Prozac 20 (fluoxetine), had been discussed with her.

Family History

Judy's father was a 54-year-old bank manager in good physical and emotional health, her mother a 52-year-old hospital clerk, also well. Both were described as always showing a great deal of love and concern for her. Mum and Dad were both fairly quiet, with Dad liking an orderly life and set routines while Mum was described as dominating and fairly rigid in her expectations of the children. There were five siblings: the eldest, Mary, was 29 years old, married, and worked as a bank supervisor; Donald, 28, was also married and worked as a police detective; Jill, 22, was married and did not work; while Sandra, 17, and Mark, 14, were both students. Judy reported that she had good and reasonably close relationships with all her siblings. There was no family history of psychiatric illness.

Personal History

Judy was born in Sydney in 1965. She reported her mother's condition during pregnancy as healthy and her own developmental milestones as normal. She stated that she was somewhat "fearful" as a child, but otherwise had a healthy childhood and adolescence.

Judy began school at four and a half years and completed her HSC in 1982, aged 17 years. She stated that she was a good student and always above average at school. Her relationships with teachers were good and problem-free. Although somewhat shy and hesitant to approach others, Judy reported that she got on well with fellow students and had several close friends.

Childhood games consisted of playing make-believe with her sisters, in which they would usually mimic television personalities. Judy also participated in Irish dancing and this interest continued into adolescence, when she also developed an interest in reading. Reading was currently her main hobby, the rest of her time being occupied by work, housework, and visiting family.

Judy was very happy in her current work as a secretary and stated that even if she was well she would not return to nursing.

She had married 15 months before, after knowing her husband for one and a half years including an engagement period of eight months. Her husband, Robert, was 28 years of age. He had been a factory manager for the past seven months, working for a company which supplies conveyor belts mainly for the mining industry. She described her husband as fairly quiet, very pleasant, although moody at times, and in good physical and emotional health. They were compatible in their personalities, conversation, family closeness, and some

interests, although they currently had some sexual difficulties because of her decreased libido. There were no children but Judy stated it was her ambition to raise a family. Menstruation commenced at 13 years, was regular, of three to four days' duration and accompanied by mild pain and premenstrual tension.

Judy did not use cigarettes, nor was there a history of illicit drug abuse. She drank a glass of white wine per week, which she stated relaxed her and elevated her mood.

Past Medical History

Her past medical history was unremarkable, there being no incidence of accidents or operations, and Judy described her health as very good.

Mental State Examination

Judy was 162 cm tall, weighed 51 kg, was of slight build with shoulder-length wavy blonde hair. She was smartly yet casually dressed in light blue jeans and matching jacket and wore Reebok shoes. She appeared anxious and agitated at interview but communicated and maintained good eye-contact with no evidence of any thought disorder or retardation.

Aside from her initial tenseness, which appeared generalised to situations other than "being at home," such as "being near people I don't know, particularly large crowds and unfamiliar places," Judy denied any depressive symptoms such as loss of appetite, weight, or sleep; suicidal ideation; or feelings of guilt. However, she admitted to a lack of concentration and inability to make decisions, feeling panicky, inability to relax, bowel disturbances, and lack of libido. These symptoms may be attributed to anxiety.

There was no evidence of any hallucinations but Judy was preoccupied with thoughts of possible contamination from "things on the ground": these "things" were generally thought to be discarded condoms or tissues. As Judy worked in Fitzroy Street, St Kilda, there was some basis in reality, during the week at least, for her to have actually seen these items in the street. However, her fears were not confined to the area. She also had a fear of contacting blood either directly or from someone's clothes.

Judy was of above average intelligence, oriented in time and place, and there were no problems apparent with either her memory or concentration.

Formulation

In summary, Judy was a 26-year-old, married receptionist with a five-year history of checking and fear of contamination, especially relating to the AIDS virus, the severity of which caused her to give up her nursing career. Her obsessions resulted in excessive hand-washing and showering, laundering and dry-cleaning of clothing, and not being able to wear her shoes into the house for fear she might spread contamination. Her diagnosis was that of obsessive-compulsive disorder.

CLINICAL SESSIONS

Session One

The first session was devoted to history-taking, which was supplemented by the completion of a detailed life-history questionnaire and ascertaining her therapeutic goals. Her aim was "to be normal." Judy operationalised this goal by stating that she wanted to:

1. Be able to walk down the street without worrying about what contaminated objects she might walk on.
2. Stop washing her hands after passing "things" in the street.
3. Be able to wear her work clothes more than once before having them dry-cleaned.
4. Be able to go into supermarkets and other public venues without worrying about becoming contaminated by "unsavoury-looking" people.
5. Contain her fear of blood contamination, for example, if she saw blood on a tissue.

The session ended with a discussion of the techniques which might be used to facilitate these goals: for example, thought-stopping, distraction, and relaxation. Discussion also centred around Judy's being able to differentiate between reality and non-reality — the appropriateness of an AIDS test after intercourse with a bisexual man versus the perceived need for AIDS testing after each time she saw, or thought she saw, a condom on the street. Judy agreed to maintain a daily diary listing any precipitating events, together with the accompanying automatic thoughts, actions, and feelings.

At the conclusion of this clinical assessment session, it seemed that an understanding of Judy and her problems had been achieved. It appeared that she was highly motivated to change and a mutual rapport had been established.

Session Two

Review of the diary confirmed that Judy was searching the footpaths for "things," especially condoms, on her way from her car to her office and on her return. The thought that she might have seen "something contaminated" prompted her to wash her hands, carry out the shoe rituals, and excessively dry-clean or wash her clothes. Judy said that she had used the thought-stopping techniques with some degree of success during the week but she still felt the need to wash her hands "just in case" she had touched something.

After discussion of realities versus obsessiveness, a behavioural program was agreed upon whereby Judy would:

1. Limit her hand-washing to one session of no more than 10 hand-over-hand actions.
2. She would not dry-clean her woollen clothes after each wear but extend this to at least three wears.
3. She would continue to use thought-stopping, distraction, and challenge her automatic thoughts.

The use of hypnosis in assisting people to relax mentally and physically when anxious (Burrows, 1980), enhancing mental rehearsal of problem-solving strategies in difficult situations, and the use of appropriate coping strategies were discussed. The phenomena of hypnosis were explained to Judy as a "naturally occurring state characterised by aroused, attentive, focused concentration" (Speigel, 1983) and it was suggested that she, like many others, had experienced an aspect of hypnosis when absorbed in a picture or daydream (Tellegen & Atkinson, 1974). Issues of control during the hypnotic trance were explained in the context of a driving instructor model where the hypnotherapist, like the driving instructor, was a guide not a controller. Judy agreed to explore the concept further through a standardised test of hypnotisability (Stanford Hypnotic Clinical Scale for Adults [SHCS]; Morgan & Hilgard, 1979).

Judy scored 5 on the SHCS and stated afterwards that she felt wonderful. A second progressive relaxation induction was used and Judy was instructed to go to a "place where she felt really good." This imagery was combined with suggestions to improve her self-esteem. The place she chose pre-trance was her bed, "snuggled in under the doona, safe and warm, no worries." Judy felt very relaxed there and stated that, on an anxiety scale of 0 to 10, she was "about 2 — very relaxed."

Utilising the feeling on control and security developed during the imagery, Judy was then asked to experience herself going to work one day during the past week when she might have seen "something" on the footpath, and to raise her index finger when she was seated working at her desk. Judy's breathing became noticeably shallower and faster during this time, and on completion of the assignment she rated her anxiety as 7 to 8 out of 10. A relaxed baseline state was re-established by suggesting Judy return to the safety of her bed, and all the good feelings, sense of well-being, and control that she could access there. The above sequence was repeated twice, with Judy incorporating her coping strategies and tapping into her sense of well-being. Anxiety was rated 5 and 3 on the successive rehearsals, coming back to a baseline of 2 each time. Post-trance, Judy was encouraged to add thinking "Re—" as she breathed deeply in, and "Lax" as she exhaled to her list of coping strategies.

For the next week, Judy was encouraged to implement her strategies in vivo and to practise self-hypnosis for both rehearsal and resolution of incidents.

Session Three

Judy was delighted with her progress during the week. Hand-washing had improved to the extent that she sometimes felt "10 rubs" were too many and she had reduced this to eight. None of her clothes had been dry-cleaned and two garments had been worn three times (one was a carry-over from before the last session).

Judy had found the breathing technique highly useful, enabling her to stop her thoughts and distract, and she reported two days when, using these techniques, she had been response-free.

While reinforcing Judy's achievements there appeared a sense of unease about her greater than her usual presentation. When asked how she was feeling at this time she acknowledged, with apparent relief, that she felt highly anxious. She was concerned that she was seated in a chair that had blood on it, as she thought the client who left the room ahead of her may have had blood on the back of her jacket. We discussed the realities of possible AIDS contamination from such a remote contact, assuming her observation of the blood was correct. A somewhat calmer and more logical Judy was then able to say: "There are four chairs in this room, she may not even have sat in this one." Judy reported her anxiety peaked at 8 during this time but it had settled back to 3. It was decided to use hypnosis to reinforce and complete her resolution of this incident. Judy went through the previous scenario twice, with visits to her safe place interspersed. The first time her anxiety reached 7. On the second occasion, with her anxiety at a level of 5, Judy was asked if she would like to remain in trance but stand up, open her eyes, and look at the back of her chair, just once, to ensure that there was no blood on it. She agreed. When she sat down again she reported her anxiety at 3 to 4, and was asked if she could now let it go. She replied yes.

While still in trance, Judy was asked if she would be prepared to wear her blouse again the next day (Sunday) without having washed it. She was also asked whether she would wear her weekend shoes (her Reeboks) again even if it was only around the garden for half an hour or so. She agreed to try both and it was suggested that she rehearse these events whilst still in trance; any difficulties she might experience were to be overcome by use of her coping strategies, such as breathing and distraction. Judy was to rehearse leaving the room, going to the market with her husband, returning home, leaving her Reeboks at the front door, washing her hands once, getting up after a pleasant evening, and dressing in her jacket and Reeboks from today without any undue feelings of discomfort. This sketchy scenario was not only implemented but expanded upon by Judy. She was able to perform all the set tasks and she added in seeing "something" at the market while her anxiety level remained at 2. She also wore the same clothes on Sunday. Trance was ended following positive reinforcement and suggestions to boost Judy's self-esteem and feelings of control. At the end of the session Judy reported feeling very relaxed and confident.

Session Four

Judy presented as anxious and somewhat ambivalent about the past week. Following the last session she had gone to the market and worn both her shoes and jacket again the next day, but one day during the week she had *really seen* a condom. She had felt compelled to wash her hands three times

because each time she sat at her desk to begin work she was not sure if she had actually washed them. She was also worried about the skirt she had worn that day. Judy was less condemning of herself when it was pointed out that she had only had one bad day; she had only washed her hands three times, not five or six as she was doing earlier; and although she was concerned about the skirt, she had not immediately sent it to the cleaners. It was also pointed out to her that in achieving her goals a *ripple effect* was to be expected, that is, there would be some dips in her upward path to achieve her aims. Judy acknowledged this phenomenon and contributed that even for people without her problems, some days were better than others.

The implementation of a signal to reassure her that she had washed her hands was discussed. As Judy always wore two rings, one of which had a large stone in it, she agreed to turn this ring inward when washing her hands (only in highly fear-specific situations), being conscious of the slight discomfort of the stone against her palms when actually washing and drying her hands, and only when she had sat at her desk and was able to acknowledge to herself that she had washed her hands, was she to turn the ring around the correct way.

Judy acknowledged that her skirt could not be contaminated and she agreed to wear it to work on the following Monday without cleaning it.

As she had been practising self-hypnosis during the week to enhance her self-esteem and to rehearse difficult situations, the session was concluded with a suggestion that she "walk ahead" rather than walking along looking at the footpath immediately at her feet and to each side. This concept was framed in terms of looking a little further ahead, just as she would do when driving her car, so that she would be better placed to bypass any "things" in her path.

Session Five

This had been a good week for Judy. Thursday and Friday were the Jewish New Year holiday and her firm had closed, allowing her an opportunity to spend time with her mother. They chose to go shopping in the city on both days and travelled on the train from an outer Melbourne suburb. Judy distracted herself when she saw "unsavoury people" or "things" on the ground and was generally very pleased with herself. She commented that she had rehearsed the trip to the city on the previous evening using self-hypnosis.

Some time was spent discussing how Judy might re-frame some of her thoughts so that the emotive, fear-provoking content could be removed. For the scared "Oh, what is it?" (on the ground), the neutral "Some people are untidy" was substituted; while for the concept of "sleazy/unsavoury people" Judy volunteered that "We all have different standards."

Judy was congratulated on her progress and asked how close she thought she might be towards achieving her goals, if 0 was the beginning of therapy and 10 represented her goals. She rated herself at about 6 to 7. Judy's husband,

Robert, was invited to join us at this stage and her excellent progress was again commented on. Robert volunteered that life had been much easier at home. Judy was generally more relaxed and less worried, the dry-cleaning bills had gone down, and he was more comfortable with the situation. As Judy had been referred for a limited number of sessions and was doing so well, the concept of tapering therapy was now discussed. It was agreed to hold one or two more sessions, with follow-ups in one and then two months' time. The concept of continued homework was stressed to both, especially the use of self-hypnosis for relaxation, to help control anxiety, and to build in positive reinforcements to help improve Judy's self-esteem. It was also suggested that there might be an occasional bad day but this was not to be catastrophised. Judy was invited to telephone during the follow-up intervals if she felt she needed assistance. An appointment was made for the following week.

Session Six

Judy was reviewed separately by both authors this week. Although she had experienced no major incidents during the week and considered herself to be coping very well with regard to her obsessive-compulsive behaviour, Judy still presented with some generalised anxiety. Her Anafranil was increased to 175 mg.

Judy found cognitive reframing of her responses to stimuli was highly successful and she was able to generalise this concept to other areas. Focusing on her breathing ("Re-Lax"), rehearsal using self-hypnosis, and looking ahead were all successful strategies. She had only to turn her ring around once during the week and none of her clothes had been sent to the cleaners.

The greater likelihood of seeing condoms in the street because of the suburb in which she worked was discussed, and Judy raised the issue of whether she should leave that job. On balance, as she was presently coping well, liked her job, and wanted to stay employed for only a few months more before trying to conceive, she decided she would remain there.

There were no other issues that Judy wished to pursue at this time and she agreed that she would like to extend her next visit to three weeks. The session closed with a progressive relaxation induction, not to review problems, but to provide an enhancement for ego-strengthening suggestions and to emphasise to Judy the importance of using hypno-relaxation as a means of reducing her overall anxiety level. While enforcing her subjective baseline of 2, it was also suggested how much more relaxed and good about herself she might feel if that should reduce to a 1 or even to zero.

Three-Week Review

Judy rated herself 8 out of 10 over the past three weeks. She had coped very well: she had not washed her hands more than once on any one occasion and she had limited herself to six or eight hand-over-hand movements; she

had not dry-cleaned any clothes over the period; she was generally able to "walk ahead" and also walk amongst people; and she felt that "Re-Lax" was helping her in many situations. Judy perceived her current problem as the morning, when she was most anxious. She was still sometimes frightened that she had stood on "something" walking from her car to the office, and this was when she had to work hardest to maintain control over her thoughts and actions.

Strategies for use in this situation, such as "Re-Lax" before she got out of her car, continuing to look ahead, and conceptualising her shoes as her protectors, that is, know that they were between her and any possible "thing" and that not only the soles but also the uppers were protecting her, were discussed. Judy felt comfortable with the image of her shoes as protectors and agreed to use hypnosis to practise this technique.

Following a progressive relaxation induction, Judy's preferred induction technique, she rehearsed two morning trips to work and reported anxiety levels of: 2 (baseline), 4 (situation), 2 (baseline), 3 (situation) and 2 (baseline). Judy was congratulated and asked if she was happy with a baseline of 2 or if there was still some tension in her body. She replied that she was happy with 2 but there was a little tension in her head. It was suggested she picture a large kitchen sponge applied to her head; she could move it around to absorb any tension and she could also wring it out if it became too full or soggy (Finer, 1988). Judy was able to do this and reported that she was tension-free at 1.

A review session was scheduled for two months later, with the proviso that Judy would make an earlier appointment if required.

DISCUSSION

That Judy had successfully achieved her goals by the end of the six sessions of brief therapy was admirable; but the multi-faceted nature of the treatment program made it difficult to attribute causality. Certainly she had worked hard, both in sessions and in vivo on both the behavioural and cognitive aspects of the therapy. It must be remembered that Judy was also on a therapeutic dose of clomipramine (175 mg nightly).

Marks (1987) reviewed a series of studies of the efficacy of clomipramine in OCD patients and concluded that this drug did improve rituals, depression, anxiety and social adjustment. Gains were evident from week 4 and maximum from weeks 10 to 18 but reduced by week 36 just before medication was phased out; were no longer significant by 1-year follow-up and several cases relapsed on stopping clomipramine. At completion of therapy, Judy certainly fitted into Marks' 10- to 18-week window. It will be interesting to follow Judy's prognosis in these terms.

In an overview of the pharmacological properties of clomipramine in OCD, McTavish and Benfield (1990) stated that when clomipramine was given with anti-exposure therapy, no drug effect was observed. They also suggested that:

"In terms of long-term management of obsessive-compulsive disorder, exposure therapy has, on current evidence, an advantage over drug therapy, particularly in compulsive ritualising patients" (p. 146).

However, Greist (1990) wrote that it is generally not possible to predict whether a patient will benefit from behavioural or drug therapy (a serotonin uptake inhibitor such as clomipramine). He reported reduction in obsessive-compulsive symptoms as 30% to 42% on drug therapy, and an average of 50% using behaviour therapy.

In review of Judy's case she had a previous history of symptoms, followed by a therapeutic dose of clomipramine for approximately six to seven months before a recrudescence of her symptoms. The present report of combined psychopharmacological approach has resulted in reduction of those symptoms although causality cannot be attributed at this time. It may be that the cognitive aspects of this therapy, in conjunction with hypnotic rehearsal, will enable Judy to challenge any future precipitating factors, such as the current one of seeing a condom in the street, especially at such future time as she again ceases the clomipramine.

There can be little doubt about Judy's motivation to overcome her problems as not only did she practise the techniques regularly, she also drove some 60 km each Saturday for six consecutive weeks for an 8.00 a.m. appointment.

Two-Month Follow-Up

Judy presented smiling and very relaxed. She confidently stated that she had not experienced any untoward symptoms since the last session and was highly pleased with the attainment of her therapeutic goals. She rated herself as 8 out of 10.

It was agreed that she will slowly taper off clomipramine over the next few months while under regular medical review.

At subsequent follow-up Judy had maintained her progress, rating herself as "9 out of 10," while continuing to taper off clomipramine.

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THE BENJAMIN FRANKLIN REPORT ON ANIMAL MAGNETISM: A SUMMARY COMMENT

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We summarise and discuss the Report of the first scientific investigation of what is now called hypnosis. This investigation of animal magnetism in 1784 by a group of scientists was headed by Benjamin Franklin. We examine the claims investigated, the methods employed, and the conclusions reached. The essential theoretical and methodological concerns of the first investigation continue to be seen in contemporary research on hypnosis.

The first systematic investigation of what we now call hypnosis was conducted by a group of scientists commissioned by Louis XVI of France on 12 March 1784 to investigate animal magnetism as it was described and practised by Franz Anton Mesmer. The Royal Commission was presided over by Benjamin Franklin, who was the American Commissioner to France (for discussions of Franklin's activities in France, see Hale & Hale, 1888; Lopez, 1966; Lopez & Herbert, 1975) and was composed of members of the Academy of Sciences, the Royal Society of Medicine, and the Faculty of Medicine. The Report of the Commission was submitted on 11 August 1784, by Franklin, Majault, Le Roy, Sallin, Bailly, D'Arcet, De Bory, Guillotin, and Lavoisier (Franklin et al., 1785; note all page numbers appearing in parentheses refer to this Report as it was reprinted in Tintertow, 1970). The Report described a series of astute observations and clever experimental manipulations that can be said to be sophisticated even now, more than 200 years later (see also Tintertow, 1970; Sarbin & Coe, 1972; Sheehan & Perry, 1976; Shor, 1979).

A measure of the influence of the Franklin Report is seen in the changing fortunes of Mesmer during the months of 1784. Prior to the submission of the Report, Mesmer had been the toast of Paris, dealing with many wealthy patrons and associated with D'Eslon, who was the physician of Count d'Antois, the future Charles X. Following publication of the Report, Mesmer was a focus of public scorn and ridicule (for discussions of the rise and fall of animal

magnetism, see Barrucand, 1967; Binet & Fere, 1888; Darnton, 1968; McConkey & Perry, 1985; Podmore, 1964). In this paper we provide a summary and discussion of the Franklin Report and focus on the claims investigated, the methods employed, and the conclusions reached.

CLAIMS INVESTIGATED

The commissioners initially defined the area of investigation as the theory and practice of animal magnetism as outlined by Mesmer, and they focused their investigation on the corresponding views and practice of D'Eslon (Bloch, 1980). Animal magnetism was considered "a sovereign instrument for securing the health and lengthening the existence of mankind" (p. 84). More specifically, the basis of animal magnetism was claimed to be:

A fluid universally diffused, the vehicle of a mutual influence between the celestial bodies, the earth, and the bodies of animated beings ... The animal body is subject to the effects of this agent; and these effects are immediately produced by the agent insinuating itself into the substance of the nerves ... The action and the virtue ... are capable of being communicated from one body to another, animated or inanimate ... Though the fluid be universal, all animal bodies are not equally susceptible of it. (p. 83)

In addition, animal magnetism was claimed to be:

Capable of curing immediately diseases of the nerves and immediately other distempers; it improves that action of medicines; it forwards and directs the salutary crises ... by means of it the physician becomes acquainted with the state of health of each individual, and decides with certainty upon the causes, the nature and the progress of the most complicated distempers; it prevents their increase, and effects their extirpation, without at any time exposing the patient, whatever be his age, sex, or constitution to alarming incidents, or impleasing consequences. (pp. 83-84)

METHODS USED

After defining the issues to be investigated, the commissioners conducted their investigation in a very systematic manner. They employed public observation, self study, case study and hypothesis testing.

Public Observation

Initially the commissioners observed the method employed by D'Eslon in his public practice. This involved assembling patients around a large circular wooden box filled with iron filings and water and out of which protruded lengths of iron that were angled and movable. This was to allow the patients to touch various parts of their body with the iron. Besides this *baquet*, patients were sometimes linked with a cord and sometimes held hands. With an harmonica playing in the background, assistants carrying iron rods magnetised the patients by "passes" with either their hands or iron rods over parts of the body. In particular, the patients were "magnetised by the application of

the hands, and by the pressure of the fingers upon the hypochonders and the regions of the lower abdomen" (p. 88). The commissioners observed that the patients exhibited a wide variety of behaviour in response to these techniques. Some patients displayed drowsiness and tranquillity, others appeared to be in pain, and others displayed convulsive seizures. Following Mesmer's theory, the commissioners adopted the notion of *crises* to describe this variety of behaviours. Further, contact with objects that had been magnetised (e.g., trees, and basins as used in later experiments by the commissioners) was also presumed to cause similar effects. They also observed that there were many more women than men experiencing the crises and it generally took one or two hours of magnetising before the crises occurred. Nevertheless, "when one had taken place, all the others commenced successively, and without any considerable interval" (p. 88).

In assessing the nature of their observations, the commissioners decided they could not conduct any experimentation in the public context since "too many things are seen at once for any of them to be seen well" (p. 88). They decided it was not necessary to attend any more public demonstrations unless they wanted to clarify observations they had already made or needed to make new observations if the nature of the public methods and effects changed. Further, they decided their task should be to "inquire into the possibility and existence of the magnetism" (p. 89). In addition, they decided to focus on the existence of magnetism and not to deal with the effects until they had determined whether it existed. The basis for this was that "the animal magnetism may indeed exist without being useful, but it cannot be useful if it does not exist" (p. 89). Interestingly, although the commissioners considered that if animal magnetism did not exist, then it could not have curative value, Franklin privately thought this logic was not entirely correct. He personally considered belief and hope to have powerful therapeutic effects, but realised that publicly endorsing the curative effects of something that could not be shown to exist could lead to medical quackery (McConkey & Perry, 1985).

After much debate among themselves, the commissioners decided there was no way to prove directly the existence of magnetism. Rather, its existence had to be inferred from its action upon "animated bodies." The commissioners debated whether this action should be observed in terms of "its solitary effects in the treatment of different diseases, or in momentary effects upon the animal economy and the perceptible changes there produced" (p. 91). Although D'Eslon argued strongly for focusing on the impact of magnetism on disease as the way of proving its existence, the commissioners decided that: "It would be absurd to choose a method of deciding upon the existence of this agent, which, by attributing to it all the cures performed by nature would tend to prove that it had an action useful and curative, when in reality, it might have no action at all" (p. 93).

D'Eslon continued to disagree, but Mesmer agreed that "it cannot be demonstrated that either the physician or the medicine causes the recovery

of the patient" (p. 93). The commissioners decided to focus on "the instantaneous effects of the fluid upon the animal frame excluding from these effects all the illusions which might mix with them" (p. 93). In their experimentation, the commissioners decided to focus on single subjects, some chosen for "their simplicity" and others "their intelligence" (p. 94).

Self Study

Initially the commissioners observed the effects of D'Eslon's methods upon themselves. These experiments were conducted in a setting separate from the public practice of magnetism, and they were restricted to the commissioners, D'Eslon, and D'Eslon's assistants. Although the procedures were those used as in the public setting, none of the commissioners experienced any sensations, "or at least none which ought to be ascribed to the action of the magnetism" (p. 95). After several attempts, including one that went over three successive days, without experiencing any effects they could not attribute to either "ordinary variations in the state of their health [or] from the pressure employed upon the region of the stomach" (p. 96), the commissioners "could not avoid being struck with the difference of the private experiments made upon themselves from the public experiments" (p. 96) they had observed. They decided that one possible explanation of this was the degree of health of the participants (although the commissioners pointed out that several of them were not well), and "resolved to make experiments upon persons really diseased, and ... chose them out of the lower class" (p. 96).

Case Study

The commissioners assembled, at the home of Benjamin Franklin who was ill during much of the investigation, seven ill people from the lower class. D'Eslon employed his methods but only three of the people reported any effects. Since the commissioners could not easily explain these effects, they decided to make use of a group of patients "from the polite world ... whose understanding made them capable of inquiring into and giving a faithful account of their sensations" (p. 98).

The commissioners assembled four ill people from the upper class, and these people were magnetised by D'Eslon. Two of them experienced effects and provided detailed descriptions of the sensations. In essence, one felt heat (rather than pain) in a diseased knee, and the other felt sleepiness (rather than nervousness) for a nervous disorder. Similar experiments were conducted with other people, including the ill Benjamin Franklin, and the commissioners found only 5 of 14 people experienced some effect of D'Eslon's techniques.

Across the various case studies, the commissioners noted that the effects they could not readily explain in terms of the physical manipulations used were possibly "augmented by moral causes" (p. 101). They described this as occurring when an individual "is introduced to a large company ... an experiment is performed on him ... which is new to him and from which he persuades

himself beforehand that he is about to experience prodigious effects ... and he thinks he shall contribute more to our satisfaction by professing to experience sensations of some kind" (p. 101). The commissioners considered such a situation to provide at least a reasonable alternative explanation to that of magnetism. In addition, they noted that the children and the "idiots" they had employed in these case studies did not experience any effects and argued that this was because those individuals were not able to determine whether they "ought to have felt anything" (p. 102). The commissioners decided that the effects they had observed "supposing their reality, were the fruits of anticipated persuasion, and might be operated by the mere force of imagination" (p. 102).

Hypothesis Testing

To investigate this possibility, the commissioners undertook experiments designed "to determine to what degree the power of the imagination can influence our sensations" (p. 102). Also, the commissioners began observing the work of Jumelin, who considered himself to be unassociated with either Mesmer or D'Eslon, but whose methods were very similar to the methods of those magnetists. Of 11 people who were magnetised by Jumelin, only one woman experienced any effects and the commissioners decided to employ her for their initial investigation of the impact of imagination.

This woman was blindfolded and magnetised, but could not determine the parts of her body towards which Jumelin was directing the magnetism. However, once the blindfold was removed she was magnetised again and rapidly experienced a crisis. Following this, she was blindfolded again and told that Jumelin (who was now out of the room) was magnetising her and she experienced another crisis. Finally, after 15 minutes Jumelin was brought into the room without the woman's knowledge and began magnetising her. The crisis decreased rather than increased. These procedures were repeated on two other people and the results were identical. The commissioners noted that the effects were similar to those observed in the patients of D'Eslon, even though some of the magnetism methods employed were the opposite. They concluded that the patients' "answers were determined by the questions that were put to them, that is, the question pointed out where the sensation ought to be" (p. 105). The commissioners decided to follow this line of inquiry further by taking individuals and "not to magnetise them at all, but to put to them questions so framed as to point out their answers to them" (p. 105). Further, the commissioners considered that "when no operation was performed upon [the patients], their sole answer ought to have been, that they felt no sensation at all" (p. 105).

To test this, Jumelin's servant was blindfolded and told he was being magnetised. He reported a variety of sensations. The more specific the information he was given (e.g., an iron rod placed near his forehead), the more specific his reported sensations became (e.g., pricking in his forehead). When an iron rod was held near his forehead, however, he reported no such

sensations. This procedure was repeated on "a man of learning" (p. 106) and the results were similar. In fact the sensations were reported to be much stronger than those he had experienced previously. Following these two subjects, the commissioners performed "an infinite number of [similar] experiments" (p. 106) and used a variety of magnetising procedures. Their findings indicated that no matter what procedure they employed, the results were similar. They concluded "that the imagination alone is capable of producing various sensations [and that imagination] entered for a considerable share into the effects attributed to animal magnetism" (pp. 106-107).

Although the commissioners considered they were correct in their line of inquiry and reasoning, the fact that the imagination manipulations had not led to major crises of the sort they had observed in the public setting concerned them. They decided to do further research to determine "whether by the mere energies of the imagination it were possible to produce crises" (p. 107). After much discussion of the way in which to investigate the issues, the commissioners decided to base their research on the following principle of magnetism: "when a tree has been touched ... every person who stops under it, ought to experience in a greater or lesser degree the effects of this agent" (p. 107). D'Eslon agreed to participate in this experiment provided he could bring a subject he knew to be highly susceptible. This was agreed and the experiment was conducted in the garden of Benjamin Franklin so that he could observe (Lopez & Herbert, 1975).

In the experiment, D'Eslon magnetised an apricot tree while the 12-year-old boy who was the subject remained in the house. The blindfolded boy was then brought into the garden and the commissioners positioned themselves to interfere with and/or observe any attempt at communication between D'Eslon and the boy. The boy had been instructed previously by D'Eslon to embrace the tree to maximise the effects of the magnetism. He was taken to successive trees that were 27, 36, 38, and 24 feet from the apricot tree and he displayed increasing signs of a crisis and fainted at the fourth tree. Although D'Eslon argued that the magnetism had spread to all the trees, the commissioners argued that if that were the case then nobody could "hazard a walk in the garden without the risk of convulsions, an assertion which is contradicted by the experience of every day" (p. 108). The commissioners concluded that the crisis displayed by the boy was due entirely to the influence of imagination.

They conducted several other experiments to explore this issue and used different procedures and different subjects. The results were always similar. For instance, two women whom D'Eslon considered highly susceptible were placed in different rooms of Franklin's house while D'Eslon was magnetising Franklin. One was told that D'Eslon had entered the room and was magnetising her and she displayed a crisis. The other was told D'Eslon was magnetising her through the closed door and she displayed a crisis. The crises these women displayed were entirely similar to those displayed in the public setting.

To explore the range and the limits of the impact of the imagination, the commissioners conducted several detailed case analyses. One of these focused on "the experiment of the magnetic basin" (p. 110). The aim of this experiment was for the subject to discover which of several basins was magnetised. When the subject arrived for this experiment, she began experiencing a crisis before even seeing the commissioners or D'Eslon, an event the commissioners thought indexed a "distinguished effect of the influence of imagination" (p. 107). After recovering from this crisis, she was presented successively with several china basins that were not magnetised but she increasingly experienced another crisis. To help her recover she was given a drink of water in the basin that was magnetised, and "she drank with perfect calmness and said that she felt much better" (p. 107). When she was asked about her crises in the absence of magnetism she replied, "If you did nothing to me, I should not be in the condition in which I am" (p. 107).

Another case analysis focused on one of Jumelin's patients whom he claimed to be able to deprive of speech through magnetism. In this experiment, a woman was blindfolded and was told she was being magnetised for speech deprivation, but there was no effect. The magnetising procedure was then performed without her knowledge, and again there was no effect. Then the blindfold was removed and the procedure was performed, and this time there was an effect. Finally, the subject informed Jumelin of the specific procedure to employ to maximise her speech deprivation. When this procedure was used there was a full effect. The commissioners noted that this highlighted "it was necessary to have a gesture with which [the subject] was already acquainted to reexcite her former ideas" (p. 113).

A third case analysis was an attempt to disconfirm the hypothesis that "the imagination is the true cause of the effects attributed to magnetism" (p. 113). In this experiment, the commissioners arranged for a highly susceptible woman to be magnetised without her awareness. They arranged for a commissioner to be seated on one side of a paper doorway magnetising the woman without her knowledge, and for the woman to be seated on the other side of the doorway being interviewed by another commissioner. Although this woman usually took less than three minutes to experience a crisis, she was still not experiencing any effects after 30 minutes. The commissioners decided that "the only reason for this difference must be that she was ignorant of the operation" (p. 115). To counter the argument that the commissioner was using the wrong technique or that the woman was not now susceptible, the magnetising commissioner entered the room and employed the same technique. The woman rapidly experienced a crisis.

These findings were considered by the commissioners to rule out all explanations based on magnetism, and to show "the efficacy of the imagination" (p. 117). They commented that the sometimes greater crises observed in public settings could be interpreted in terms of "various causes ... combined with the imagination, to operate, to multiply and to enlarge its effects" (p. 117).

CONCLUSIONS REACHED

Following the completion of their experiments, the commissioners reviewed their observations and findings in terms of three factors: touch, imagination, and imitation. Regarding touch, the commissioners noted that the magnetising techniques usually involved pressure being exerted upon "the chest, the pit of the stomach and sometimes the ovaries, if the patient is female. The hands are pressed with a greater or lesser stress, as are the fingers, upon these different regions" (p. 117). Based on the then current views of anatomy and physiology, the commissioners explained how the use of pressure on various parts of the body could lead to many physical reactions (e.g., vomiting, evacuation) typically associated with the crises displayed by magnetised individuals. The tendency for more women than men to display crises was explained in terms of the "methods employed upon the ovaries of the female sex ... [since] ... the empire and extensive influence of the uterus over the animal economy is well known" (p. 119). Partly because of this observation, the use of animal magnetism procedures on women was the subject of a second, secret report written exclusively for Louis XVI. This report examined animal magnetism and sexual matters, highlighted the threat that its use posed to women, and damned the procedures on moral grounds (see Binet & Fere, 1888).

Regarding the impact of the imagination, the commissioners noted that "the action and reaction of the physical upon the moral system, and of the moral upon the physical, have been acknowledged ever since the phenomena of the medical science have been remarked, that is, ever since the origin of science" (p. 120). This position allowed the commissioners to argue also about the effects of pressure upon parts of the body that "touch is not always necessary to these effects, it may be stated that the imagination may be sufficiently fertile in resources to produce them by its sole instrumentality" (p. 120). The commissioners argued that imagination (often used by them in a pejorative sense) was the major factor underlying the crises displayed by magnetised individuals. To explain how the crises were shaped by and intensified in the public setting, the commissioners reviewed the behaviour of individuals in large gatherings such as the theatre, military campaigns, and rebellious assemblies. From this review of crowd behaviour, they concluded that through imitation, "the multitude are governed by imaginations" (p. 121).

The major conclusion of the Franklin Report was that "compression, imagination, and imitation are therefore the true causes of the effects of this new agent known by the name of animal magnetism" (p. 123), and "imagination is the principle of the three causes" (p. 123). The negative emphasis the commissioners placed on the nature and effects of imagination can be seen in their statement that "the imagination is that active and terrible power, by which we are accomplishing the astonishing effects that have excited so much attention to the public process" (p. 123). The commissioners summarised their argument that imagination was the alternative explanation to the magnetic fluid Mesmer claimed to underlie animal magnetism by saying that, "since

the imagination is a sufficient cause, the supposition of the magnetic fluid is useless" (p. 124). They expanded this notion in their damning summary statement:

Therefore, having demonstrated by decisive experiments that the imagination without the magnetism produces convulsions, and that the magnetism without the imagination produces nothing, [the commissioners] have concluded with a unanimous voice, respecting the existence and the utility of the magnetism, that the existence of the fluid is absolutely destitute of proof, and that the fluid, having no existence, can consequently have no use. (p. 126)

The empirical findings of the Franklin Report on animal magnetism remain intact and unchallenged. What has been challenged, however, is the commissioners' view that imagination can have no positive effects. As mentioned above, although this was the view put forward in the Report, it was not Franklin's private view (McConkey & Perry, 1985). Indeed, Franklin (1881) pointed out in a personal letter that if people have an "expectation of being cured by only the physician's finger, or an iron rod pointing at them, they may possibly find good effects, though they mistake the cause" (p. 259). In a real sense, the Franklin Report was all about not mistaking the cause of hypnosis. That is, of course, what contemporary investigation of hypnosis is also all about.

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EXPECTATIONS AND INTERPRETATIONS IN HYPNOTIC RESPONDING

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A total of 304 subjects rated the extent to which they expected to respond to hypnotic suggestions immediately before being administered an hypnotic induction procedure. After the induction procedure, but before administration of the test suggestions, subjects again rated their expectations, and also rated the extent to which they planned to adopt each of three interpretations of suggestions: (a) resisting suggestions, (b) actively generating suggested effects, and (c) passive waiting. Subjects were then assessed on behavioural and subjective indexes of hypnotisability. Post-induction expectancies correlated with hypnotisability more highly than did pre-induction expectancies. The extent to which subjects adopted an active set towards suggestions also correlated with hypnotisability and, contrary to the response expectancy hypothesis, active interpretation scores predicted hypnotisability above and beyond the effects of post-induction expectancies. Theoretical implications are discussed.

Although investigators generally agree that subjects' expectations play some role in influencing their hypnotic responding (Spanos & Barber, 1974), disagreement exists about the specific role played by expectancies in this regard. Numerous studies (reviewed by deGroh, 1989) indicate that the expectations held by subjects concerning their own hypnotic responding correlate significantly, but to only a slight or moderate degree, with the levels of hypnotisability they actually attain. Furthermore, several studies (Katsanis, Barnard, & Spanos, 1988; Spanos, Gwynn, Gabora, & Jarrett, (1990) found substantial variability in hypnotisability scores even among subjects who reported uniformly high expectations.

Spanos (1986) suggested that subjects with equivalent expectations may nonetheless differ in how they interpret suggestions. Hypnotic suggestions are worded passively to imply that hypnotic responses are occurrences that happen rather than actions which are carried out (e.g., "your arm is rising" as opposed to "raise your arm"; Spanos & Gorassini, 1984). Because they are worded passively, some subjects with positive expectations may construe suggestions

as requests to wait passively for effects to happen by themselves (i.e., passive interpretation). Other subjects with similar expectations may interpret the same suggestions as tacit requests to bring about the subjective experiences and behaviours called for (i.e., active interpretation). Several investigators (Gorassini, 1989; Spanos, 1986) hypothesised that subjects who hold an active interpretation are more likely to respond to suggestions than those who hold a passive interpretation. According to this hypothesis the generally low correlations obtained between expectations and hypnotisability may reflect that subjects with the same expectations nonetheless interpret suggestions differently.

Kirsch (1985; Kirsch & Council, 1989) has developed an alternative account of the relationship between expectation and hypnotisability which holds that expectation is the direct determinant of hypnotic responding. According to this hypothesis other antecedent variables such as attitudes and interpretations affect hypnotisability only indirectly through their effects on expectancy. On first blush this hypothesis appears to be inconsistent with the findings that correlations between response expectancy and hypnotisability are often low in magnitude. After all, if expectations are the direct and unmediated determinant of hypnotisability, the correlation between these variables should be very strong. However, Council, Kirsch and Hafner (1986) pointed out that studies assessing the expectancy-hypnotisability link measured expectancy before administration of the hypnotic induction procedure that precedes the test suggestions on hypnotisability scales. Council et al. (1986) suggested that exposure to hypnotic induction influences subjects' expectancies. These investigators measured expectations both before and after the induction and found that the correlation between expectancy and hypnotisability was significantly higher for post-induction than for pre-induction expectancies.

Two recent studies (Katsanis et al., 1988; Spanos, Gwynn, Gabora, & Jarrett, 1990) examined the individual and combined effects of expectancy and interpretation on hypnotisability. In both studies interpretation of suggestions was assessed in subjects who had undergone hypnotisability testing. Subjects were given brief descriptions of the suggestions they had been administered and asked to choose which of four alternatives described the interpretation they had adopted in response to each suggestion. The first alternative described actively resisting the suggestion (i.e., negative subject responding), the second alternative described a passive interpretation, the third an active interpretation, and the fourth described compliance (i.e., carrying out the required behaviour in the absence of the required subjective experience). Four interpretation scores were obtained for each subject by summing each alternative chosen across suggestions.

Katsanis et al. (1988) found that both expectancies and active interpretational set scores correlated significantly with hypnotisability. Importantly, active interpretation scores added significantly to expectancies in the prediction of hypnotisability. In other words, the effects of interpretation on hypnotisability

were not mediated by expectancy. Katsanis and co-workers measured pre-induction expectancies and, consequently, it can be argued that interpretation would not add to the prediction of hypnotisability by post-induction expectancies.

Spanos, Gwynn, Gabora, and Jarrett, (1990) examined this issue by assessing both pre-induction and post-induction expectancies, as well as subjects' interpretational sets. Like Council et al. (1986), they found that post-induction expectancies correlated with hypnotisability more strongly than did pre-induction expectancies. Contrary to Kirsch's (1985) expectancy hypothesis, however, active interpretation scores added significantly to post-induction expectancy scores in predicting hypnotisability.

In the Spanos, Gwynn, Gabora, and Jarrett, (1990) study subjects rated their interpretations only after they had responded to suggestions. Consequently, it might be argued that the interpretations chosen by subjects were influenced by their knowledge of how they had responded to the suggestions. For instance, subjects who passed suggestions may have concluded that they passed because they held active interpretations, and subjects who failed may have been more likely to conclude that they must have adopted a passive interpretation. In short, this argument suggests that the correlation between interpretation scores and hypnotisability obtained by Spanos, Gwynn, Gabora, and Jarrett, (1990) may be inflated because subjects rated their interpretations *after* hypnotisability testing.

In the present study, the authors examined this issue by assessing subjects' interpretations of the suggestions before they responded to the suggestions. Subjects once again rated their pre-induction and post-induction expectancies. We anticipated that we would again replicate the finding that post-induction expectancies correlated more strongly with hypnotisability than pre-induction expectancies. Contrary to Kirsch (1985), however, we also predicted that active interpretation scores, even when assessed before hypnotisability testing, would add to post-induction expectancies in predicting hypnotisability.

METHOD

Subjects

One hundred and forty-nine male and 155 female Carleton University Introductory Psychology students volunteered to participate in a single session experiment that involved hypnotisability testing. All subjects received course credit for their participation. None had been previously tested for hypnotisability in our laboratory.

Procedure

Subjects were tested in groups of 2 to 6 individuals on the Carleton University Responsiveness to Suggestion Scale (CURSS; Spanos, Radtke, Hodgins, Stamm, & Bertrand, 1983). The CURSS was administered via audiotape.

Pre-induction Attitudes and Expectancies

Immediately before CURSS administration subjects rated their attitudes toward hypnosis on a 14-item questionnaire (Spanos, Brett, Menary, & Cross, 1987), and their expectations concerning how they would respond to the test suggestions on a CURSS self-prediction questionnaire taken from Katsanis et al. (1988). The CURSS self-prediction questionnaire was organised in the same manner as the standard post-CURSS questionnaire used by subjects to self-score their actual behavioural responses to each suggestion. The self-prediction questionnaire described each of the 7 CURSS suggestions that were shortly to be administered. In the case of each suggestion subjects were asked to indicate whether or not they would respond. For example, the self-prediction questionnaire first provided subjects with a brief description of the CURSS arm levitation suggestion and then asked:

At the end of the suggestion, do you believe that your arm will have risen at least 6 inches?

Circle One:

- A. My arm will have risen at least 6 inches.
- B. My arm will have risen less than 6 inches.

For each of the 7 CURSS suggestions the A alternative described a "pass" response and the B alternative described a "fail" response. A single pre-induction expectancy score was obtained for each subject by summing across the A alternatives. Thus a score of zero indicated that the subject expected to fail all of the suggestions, whereas a score of 7 indicated that the subject expected to pass all of the suggestions.

Post-induction Expectancies and Interpretations

Following completion of the pre-induction self-prediction questionnaire subjects were administered the standard CURSS hypnotic induction procedure. At the end of the induction, but before administration of the test suggestions, subjects were instructed to open their eyes and were re-administered the self-prediction questionnaire. Immediately afterwards they were administered a questionnaire modified from Katsanis et al. (1988) that again briefly described each forthcoming CURSS suggestion and asked subjects to indicate which of three interpretations they were likely to adopt in responding to each suggestion. For instance, after a brief description of the CURSS arm levitation suggestion subjects chose from among the following alternatives:

Circle One:

- A. I will try to prevent my arm from rising.
- B. I will imagine my arm pumped with air and I will wait to see if it rises. I will not try to prevent it from rising and I will not help it rise. I will just wait and see if it rises by itself.

C. I will raise my arm and I will imagine air being pumped into it so as to make it feel light and rising by itself.

The three alternatives were labelled respectively resistance, passive interpretation, and active interpretation. The number of each of the alternatives chosen by the subject was summed in order to obtain a single resistance, passive interpretation, and active interpretation score for each subject.

Following completion of the interpretation questionnaire subjects were instructed to close their eyes, re-administered two minutes of "sleepy-drowsy" instructions in order to reinstate an hypnotic set, and administered the CURSS test suggestions. Following termination of the CURSS subjects self-scored their behavioural and subjective responses to the suggestions. Two CURSS scores were obtained for each subject. CURSS:O (objective) scores reflect the number of suggestions to which subjects made the appropriate behavioural response and range from 0 to 7. CURSS:S (subjective) scores reflect the degree of subjective response elicited by each suggestion and range from 0 to 21.

RESULTS

Table 1 shows the means for all the variables assessed, and the intercorrelations among those variables. With respect to the means, it was found that CURSS:O scores were significantly lower than either pre-induction expectancy scores, $t(303) = 9.51, p < .01$; or post-induction expectancy scores, $t(303) = 8.43, p < .01$. In other words, before the induction and again after the induction, subjects expected to respond behaviourally to significantly more suggestions than they actually responded to.

As anticipated, both pre-induction expectancies and post-induction expectancies correlated significantly with CURSS:O and CURSS:S scores.

Table 1 Means and Intercorrelations Among all Variables

Variable	Mean	SD	Variable								
			2	3	4	5	6	7	8	9	
Attitudes	69.81	12.36	1	.35*	.32*	.31*	.34*	-.13†	-.02	.15†	.35*
Pre-induction expectancies	3.44	1.95	2		.55*	.38*	.38*	-.10†	-.04	.14†	.55*
Post-induction expectancies	3.27	2.32	3			.54*	.52*	-.03	-.11‡	-.18†	.33*
CURSS:O	2.20	1.98	4				.80*	-.12‡	-.18†	.35*	.34*
CURSS:S	6.83	4.63	5					-.15†	-.14†	.32*	.36*
Resistance score	0.58	1.38	6						-.66*	-.07	-.05
Passive score	5.47	2.05	7							-.71*	-.06
Active score	0.94	1.64	8								.12‡
Single-item expectancy score	2.98	1.28	9								

* $p < .001$. † $p < .01$. ‡ $p < .05$.

Moreover, post-induction expectancies correlated more highly than did pre-induction expectancies with CURSS:*O* scores, $t(301) = 4.64$, $p < .001$; and CURSS:*S* scores, $t(301) = 3.88$, $p < .001$. Both subjects' attitudes towards hypnosis, and the degree to which they planned to adopt an active interpretation of suggestions, also correlated significantly with CURSS:*O* and CURSS:*S* scores.

Response expectancy theory holds that subjects' expectations are the direct determinants of their hypnotisability, and that other variables such as interpretations influence hypnotisability only through their influence on expectancies (Kirsch, 1985; Kirsch & Council, 1989). Alternatively, the interpretational set hypothesis holds that subjects with the same expectancies may, nonetheless, attain different degrees of hypnotisability because they adopt different interpretations of suggested demands.

These rival hypotheses were tested with two multiple regression analyses. CURSS:*O* scores were the criterion variable in one analysis and CURSS:*S* scores were the criterion variable in the other. In both analyses post-induction expectancies were forced into the regression as the first predictor, and active interpretation was entered second. As shown in Table 2, in both analyses the active interpretation variable added to the prediction of hypnotisability above and beyond the effects of expectancies.

The response expectancy and interpretational set hypotheses were tested further by selecting only those subjects who held uniformly high post-induction expectancies (scores of 6 or 7). Contrary to the response expectancy hypothesis, significant correlations were obtained in these subjects between active interpretation scores and CURSS:*O* scores, $r(65) = .27$, $p < .01$; and active interpretation scores and CURSS:*S* scores, $r(65) = .31$, $p < .01$. In other words, subjects' interpretations of test demands predicted variance in hypnotisability even among subjects who held uniformly high expectations of responding to suggestions.

Table 2 Multiple Regression of Post-induction Expectancies and Active Score on CURSS:*O* Scores

	Variables in regression	Multiple <i>R</i>	<i>F</i> value for increase in <i>R</i> ²
CURSS: <i>O</i>	1 Post-induction expectancies	.54	$F(1,302) = 125.03$, $p < .001$
	2 Post-induction active score	.60	$F(2,301) = 84.54$, $p < .001$
CURSS: <i>S</i>	1 Post-induction expectancies	.52	$F(1,302) = 111.03$, $p < .001$
	2 Post-induction active score	.57	$F(2,301) = 71.32$, $p < .001$

DISCUSSION

As in most earlier studies (reviewed by deGroh, 1989) we found that pre-induction attitudes and expectancies correlated significantly, but to only a modest degree, with hypnotisability. We also replicated earlier findings indicating that post-induction expectancies correlated with hypnotisability to a significantly greater extent than did pre-induction expectancies (Council et al. 1986; Spanos, Gwynn, Gabora, & Jarrett, 1990). Finally, we replicate the findings of Katsanis et al. (1988, experiment 2) that active interpretational set scores correlated significantly with hypnotisability even when interpretational set was measured before rather than after subjects responded to the hypnotisability test suggestions.

The most important findings of the present study indicate that the extent to which subjects held active pre-suggestion interpretations predicted hypnotisability above and beyond the effects of post-induction expectancies. Relatedly, subjects with uniformly high expectancies continued to exhibit variability on both behavioural and subjective indexes of hypnotisability, and this residual variability correlated significantly with the degree to which subjects planned to adopt an active interpretation of suggestions. Spanos, Gwynn, Gabora, and Jarrett, (1990) also found that active interpretation scores predicted hypnotisability above and beyond the effects of expectancy. In the latter study, however, interpretational sets were assessed *after* rather than before subjects responded to the hypnotisability test suggestions. The present results indicate that the findings of Spanos, Gwynn, Gabora, and Jarrett, (1990) cannot be explained away by suggesting that subjects in that study formed their interpretations only after they had responded to the suggestions.

The present findings, along with those of Spanos, Gwynn, Gabora, and Jarrett, (1990), are inconsistent with the hypothesis that response expectancies are the direct determinant of responsiveness to suggestion. A number of other recent studies have also obtained results that run counter to the predictions of the response expectancy hypothesis. For example, two recent studies found that suggestion-induced wart regression was unrelated to subjects' post-suggestion expectations of treatment success (Spanos, Stenstrom, & Johnston, 1988; Spanos, Williams, & Gwynn, 1990). Relatedly, Spanos, Perlino, and Robertson (1989) found that suggestions produced significantly greater reductions in reported pain than did a placebo, even though subjects in the suggestion and placebo treatments reported equivalent post-treatment expectations. Finally, Johnston, Chajkowski, DuBreuil, and Spanos (1989) found that false feedback substantially raised subjects' hypnotic response expectancies but failed to influence their level of subjective responding on tests of hypnotisability.

The extent to which subjects endorsed passive interpretations correlated in a negative direction to a slight but significant degree with hypnotisability. These findings, along with similar findings in previous studies (Gorassini, 1989;

Katsanis et al. 1988; Spanos, Gwynn, Gabora, & Jarrett, 1990), indicate that subjects who adopt passive interpretations of suggested demands are less responsive to those suggestions than subjects who adopt active interpretations. On the other hand, it is important to note that passive interpretations were endorsed much more frequently than active interpretations. Furthermore, at least some of the subjects who reported passive interpretations attained relatively high hypnotisability scores.

Several hypotheses can be offered to explain why subjects who endorse passive interpretations sometimes pass suggestions. First, at least some subjects may comply with demands to present themselves as "just letting things happen." As indicated earlier, suggestions are worded passively to imply that the effects produced occur without subjects' active involvement. Consequently, to different degrees, subjects may be reluctant to acknowledge the adoption of an active interpretational set. A number of studies (Spanos & Gorassini, 1984; Spanos, Perlini, Patrick, Bell, & Gwynn, 1990; Wagstaff, 1986) indicate that hypnotic subjects are attuned to suggestion wording, and that compliance with suggested demands plays a substantial role in hypnotic responding. It would be of interest in a future study to examine the extent to which subjects' descriptions of responding passively and involuntarily are related to independent indexes of compliance with suggested demands.

An alternative to the compliance hypothesis suggests that some subjects may have responded actively to suggestions but remained unaware of having done so (Spanos, Salas, Bertrand, & Johnston, 1988; Gorassini, 1987). This hypothesis is premised on the notion that people frequently do not gain access to the psychological processes that determine their behaviour (Gilbert & Cooper, 1985; Langer, 1985; Nisbett & Wilson, 1977). With respect to the hypnotic situation this implies that subjects may frequently respond to suggestions and other communications without, at the time, reflecting on the reasons or causes for their actions. Later, when asked to reflect back on their own responses to suggestions, these subjects are likely to make their causal inferences on the basis of the most salient information in the context (e.g., the passive wording of the suggestions, the passive content of their own suggestion-related imagery), and their tacit theories of hypnotic responding (e.g., hypnotic responses occur automatically, Spanos, Salas, Bertrand, & Johnston, 1988).

The fact that post-induction expectancies correlated more highly with hypnotisability than pre-induction expectancies in this and in earlier studies (Council et al. 1986; Spanos, Gwynn, Gabora, & Jarrett, 1990) does not, in and of itself, provide support for the response expectancy hypothesis. Instead, this finding may simply indicate that subjects become better able to predict their hypnotic responses as they gain the opportunity to observe themselves respond in the hypnotic situation. Hypnotic induction procedures consist of interrelated suggestions to relax the limbs, slow breathing, feel one's head become heavy, and so on. It is reasonable to suppose that subjects gauge their responses to these suggestions and use this information to update their

estimates of how they will respond to the forthcoming test suggestions. After all, a subject with initially high expectations, who during the hypnotic induction noted that her head did not become heavy and lower, and that her muscles became tense rather than relaxed, would probably now predict that she would respond only poorly to the forthcoming test suggestions. Such a sequence occurring across subjects would, of course, procure relatively high correlations between hypnotisability and post-induction expectancies. However, while such a sequence indicates that subjects revise their expectations on the basis of new information, it does not imply that expectations directly determine their hypnotic responding.

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USES OF HYPNOSIS IN DIABETES-RELATED STRESS MANAGEMENT COUNSELLING

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Uses of hypnosis and of components of the hypnotic experience are discussed and illustrated as an adjunct to diabetes counselling and education. A pragmatic use of hypnosis is outlined, compatible with various therapeutic orientations and patient abilities, for the management both of diabetes-specific fears and anxieties and general life stress.

There is considerable debate as to what hypnosis actually is, but research over the last decade or so has provided several therapeutic uses and techniques which are useful in a wide range of patient needs. Some phenomena which distinguish hypnosis from the ordinary waking state include (Walker, 1984): (a) shifts in consciousness, but not sleep, as measured by EEG studies; (b) narrowed focus of attention; (c) temporary suspension of critical selfawareness; (d) increased vividness of sensory imagery; (e) response to post-hypnotic suggestion; and (f) automatic relaxation response.

While about 15-20% of non-patient populations are able regularly to experience or exhibit these phenomena following an hypnotic induction (i.e., are highly hypnotisable), most patients are able to learn enhancement of (a) visual imagery, and (b) the relaxation response.

The relevance to diabetes management of this use of hypnosis — which is not a therapy in its own right — is the focus of this paper. It will be seen that a pragmatic use of hypnosis as an adjunct to diabetes counselling and education is compatible with various therapeutic orientations and patient abilities.

DIABETES AND STRESS

Most individuals are able to identify the negative affect and other reactions associated with acute stressors (e.g., arguments, situations with time or intellectual demands) but the subjective link between chronic stressors and

somatic symptoms is more tenuous. Diabetes mellitus has the capacity to present a person with its own specific stressors as well as interacting (or interfering) with situations experienced by all. In psychological terms subjective stress becomes apparent when: (a) the response to stressors (the actual stress in physiological or engineering terminology) has a meaning or importance to an individual; and (b) the individual's coping strategies are inadequate to solve, eliminate, or allow reasonable adjustment to the situation.

The complexity and subtlety of these links are often not apparent to patients who (a) know a problem exists, (b) are upset that it exists, (c) are further upset that they cannot solve it or adjust better to it, and (d) often behave in ways incompatible with longer term resolution.

Many studies (Bruce, 1988; Carter, 1985) have reported equivocal results when attempting to determine the immediate or short-term effects of stress on blood glucose levels. This is partly due to inherent difficulties in methodologies where (a) "stressors" are hard to define so that they represent real situations, (b) individual coping styles are not taken into account, (c) it is difficult to define individual stress responses, and (d) subjects are not properly matched for variables such as degree of metabolic control, insulin effects or even dietary factors. There are also differences in physiological responses between insulin-dependent and non-insulin-dependent subjects. For the above reasons (let alone age and sex variables), it is hard to relate the level of perceived threat that subjects may experience in real life to a possible direct effect on blood glucose levels.

In clinical situations people often present with varying degrees of problems, often with statements such as "I'm not looking after myself," "I've got to lose weight but can't," "My sugars aren't too good," or "I'm worried about ..." It is the therapist who then helps make the links to stress, firstly defining the main issues and secondly devising appropriate stress management procedures, which usually involve education and problem solving.

AIMS AND RATIONALE FOR THE USE OF HYPNOSIS

In the wider context of diabetes counselling and education, hypnotic techniques may be used in two broad categories: (a) to alleviate diabetes-specific fears and anxieties; and (b) to provide a coping method for life-stress other than diabetes so that a person is freer to concentrate on his/her diabetes management.

Most people respond well to the rationale that hypnosis may provide them with a means whereby, in distressing situations, they can feel calmer, think more clearly, and are more likely to use their own resources to get through the situation. The terms "relaxation session" and "hypnosis" are used interchangeably by the author, as the hypnotic induction described is a congenial method of relaxation training. It is usually not practicable in the majority of cases to assess hypnotisability beforehand, so it is something of a bonus if the patient turns out to be a "good" hypnotic subject. This also has the advantage of reducing a sense of failure, as the induction used is similar to

progressive muscle relaxation anyway. Most work with patients with hypnosis is non-invasive and time-limited (in contrast with uses of hypnosis in depth psychotherapy). Prior to its use common fears and myths are dispelled — hypnosis is not magic!

EXAMPLES OF PROCEDURE

Most properly trained therapists using hypnosis have a repertoire of induction and deepening procedures which can be tailored to match patient needs. A typical session (without detail which depends on goals and patient preferences) would be:

- | | |
|---|--|
| 1. Eye fixation | Staring at spot and suggestions of eye closure. |
| 2. Counting from 1 to 20 | Breathing easily and freely ... letting go a bit more with each breath out ... allowing body (or parts of it) to relax ... |
| 3. Experience of suggested visual imagery | Imagining a beach, leaves floating in river, or rehearsal of feared situation. |
| 4. Listening to music | Fosters deepening and is a form of imaginative involvement. |
| 5. Counting from 20 to 1 | Return to waking state. |

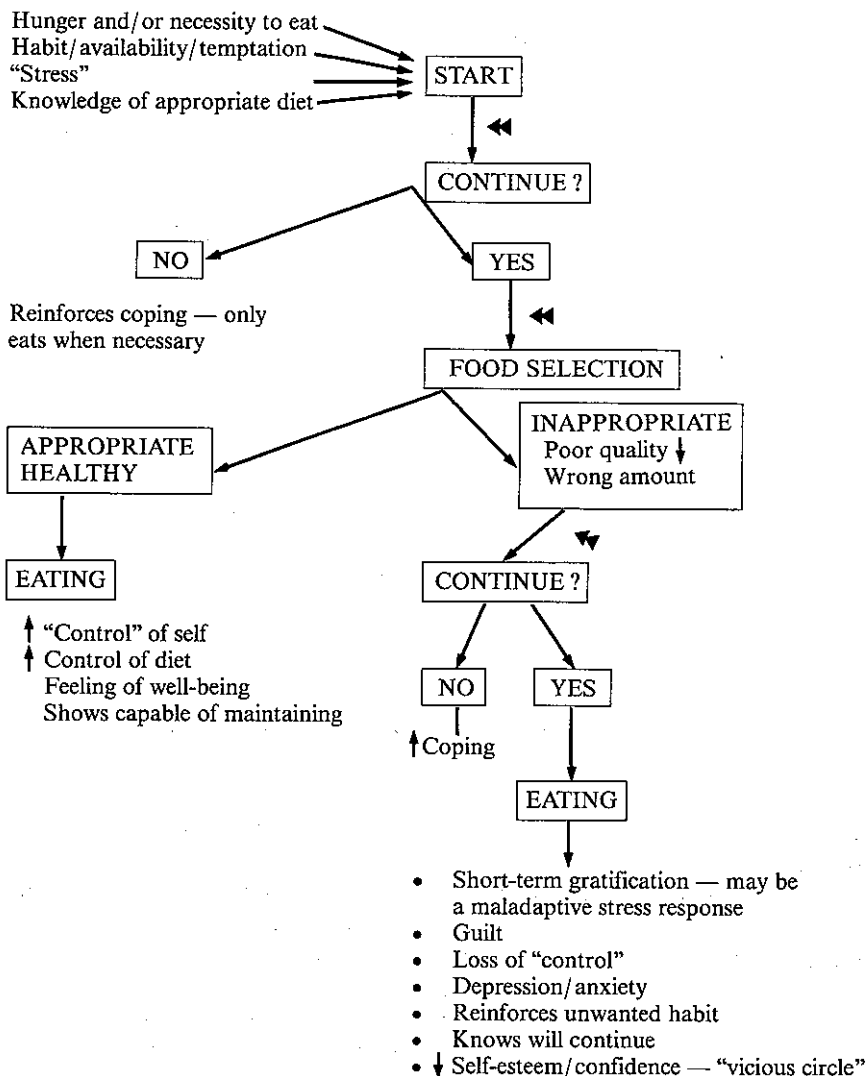
At each of these points there are strong associations with relaxation and these can be used as carry-overs to the waking-state stress situations. The technique is teaching adjustment to, rather than removal of, stress. This can be achieved in highly hypnotisable subjects by suggestion, but is reinforced by practising. "Whenever you are in a situation where you are upset you can recapture the feeling [typically experienced during the session] of being relaxed, of thinking clearly, just by breathing out and letting go a little each time ..." This is the "trigger" for an important (and new for most) coping mechanism.

This use of "applied" relaxation is compatible with behaviour modification techniques, where a patient can make decisions by relaxing quickly before continuing to (one hopes diverting from) an unwanted end-point, as illustrated in Figure 1.

Figure 1 Behaviour pathway (e.g., over-eating)

Note ◀◀ Indicates where techniques derived from hypnosis/relaxation sessions may be used by patient to change decisions in the pathway.

↑ Indicates improvement.



Most behaviour can be broken into a series of steps — continuation of the pathway depends on decision making. If decisions are made in a conscious controlled manner, free of tension, they are more likely to be "correct." Even if unsuitable end-behaviours result, they are still from a controlled viewpoint.

This may be an important first step in modifying the chain. The decision making may be rehearsed in hypnosis in suitable patients or quick relaxation techniques may be used prior to the decision.

CONCLUDING COMMENTS

The adjustments required by an individual with diabetes, considering the demands of current standards of professional care and self-care, are not easy. Unresolved stress, whether from fears about the diabetes itself or life in general, may jeopardise both metabolic control and general well-being.

While not a therapy by itself, hypnotically derived techniques are often useful in contributing to the management of these various stressors. There appears to be an enhancement of quality of life and most patients find them interesting and beneficial.

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PUBLIC EXPECTATIONS OF HYPNOSIS

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People who had been randomly selected from the general population of Auckland discussed their beliefs about, and previous experiences of, hypnosis. Subjects' comments suggest that the use of hypnosis as an entertainment fuels misconceptions and may limit the appropriate clinical use of hypnosis.

Opportunities to discuss public opinion of hypnosis are limited, since most people who attend clinicians for hypnosis are self-selected and tend to regard hypnosis more favourably. Hypnosis is currently used medically for surgery, burns, obstetrics, terminal care, dentistry, and pain control (Burrows & Dennerstein, 1980; Frankel, 1987). It may be a component of psychological treatment programs. However, hypnosis continues to be used as an entertainment which perpetuates the popular myth of the hypnotist as a magical, mysterious individual with power to tap secrets and control behaviour. People who have threatening beliefs about hypnosis may choose not to participate in a treatment program which incorporates this technique. This may deprive them of the use of a relatively safe therapeutic medium.

METHOD

Responses were collected from subjects who participated in a study of chronic pain, alexithymia, and hypnotisability (James & Large, 1991). They included (a) people randomly selected from the population of Auckland (39), and (b) outpatients visiting Auckland Hospital Pain Clinic (11). These subjects had chronic non-malignant pain of greater than six months duration. The mean age of the subjects was 45.99 years (*SD* 14.84, range 21 to 88 years). Approximately half the sample were women (50.8%), 70.3% had children, and the majority of subjects were Caucasian.

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The topic of hypnosis was discussed in obtaining consent and subjects were offered the choice of participating in the study with or without a trial of hypnosis. Subjects were asked about any previous experience with, or beliefs about, hypnosis and any misconceptions were discussed prior to deciding whether they wished to participate in the Stanford Hypnotic Clinical Scale (SHCS; Morgan & Hilgard, 1979). A number of subjects chose not to try hypnosis (15.9%, $N=14$).

RESULTS

Table 1 presents categorised reactions to hypnosis. For most subjects knowledge of hypnosis had come from stage shows or television programs. One subject told me that hypnosis was featured on *Sons and Daughters* the evening before. She was reluctant to participate in the SHCS. All of the subjects who had attended or heard of stage performances were worried about the use of hypnosis. None had left a stage performance or seen a dramatic television show with positive expectations.

Their worries were usually about loss of control and the hypnotists' reputed ability to "withdraw" secrets from the subjects. The subjects were also concerned that, once they had been hypnotised, they would continue to respond to "hidden commands" against their will and at any time. One subject agreed to participate in hypnosis only if a tape-recording of the session was sent to his lawyer. Following discussion he decided that this would not be necessary and enjoyed the experience. Another person had witnessed someone who "wouldn't come out" of an hypnotic trance. Although he regularly used relaxation tapes, he was not totally comfortable with a trial of hypnosis and terminated the SHCS after the age regression (the third of five items).

One subject had in his youth performed in a band that travelled with a stage hypnotist. This subject gave a graphic account of the performance which included the hypnotist's posing as a human dartboard, and undergoing psychic surgery, where the hypnotist ate cotton then cut his abdomen to remove the cotton directly from his stomach, before healing the wound with no bleeding. A detailed description was given of the occasional grimaces when the hypnotist's concentration wavered and of the bruises apparent the following day. In

Table 1 Subjects' Verbal Reactions to the Offer of Hypnosis ($N=49$, 38 control, 11 pain subjects)

Categories of Responses	<i>N</i>
Seen TV/stage shows/anxious/worried about loss of control	20
Worried for religious reasons	4
Tried hypnosis before and told not a good subject	6
Do not wish to try (no reason given)	4
Curious/interest/had positive experience	15

addition, this hypnotist had reputedly hypnotised a friend over the telephone, inciting him to perform inappropriate behaviour to his later embarrassment. The research subject believed that he was not hypnotisable following trials with this stage hypnotist. When tested for the study, following discussion of his concerns, he passed all items on the SHCS. There were clearly trust and safety issues implicated in his previous lack of response to hypnosis.

Another subject had been a founding member of a scientific society for the investigation of hypnosis established in the 1950s. He spoke of many famous hypnotists who had visited the society and their repeated unsuccessful attempts to hypnotise him. He believed that he was too strong-willed to be hypnotised. As he expected, he did not respond to the suggestions of the SHCS but did make several comments following the trial on improvements which could be made to the test!

Other subjects who reported themselves to be non-hypnotisable had experiences of unsuccessful treatment (usually for smoking cessation) and had been told that lack of improvement was due to their inability to use hypnosis.

Several subjects felt hypnosis contravened their religious beliefs. However, the nun who participated did not have these concerns and enjoyed the opportunity to experience hypnosis.

Subjects who were interested in hypnosis had some unusual expectations of the experience. One subject thought it would be "like IV Valium." Another had had a recurring dream of a street scene which she had later "recognised" when in Paris. She felt that this was a past-life experience and wanted to use hypnosis to explore this and other past lives that she believed she had had.

Three subjects had close relatives who had used hypnosis successfully to cope with medical difficulties. They had positive reactions to the SHCS. One had been taught hypnotic techniques to help her daughter control severe asthma. Another said his daughter had been helped with a difficult pregnancy where medication was inappropriate. This contrasted with a subject in this study who asked whether hypnosis would harm her five-month pregnancy.

DISCUSSION

It was encouraging to find that many people had positive reactions to the use of hypnosis. However, there are repercussions of the uncontrolled use of hypnosis. All subjects who had seen television or stage performances were concerned about the use of hypnosis. The majority of the subjects who expressed some worries were happy to try hypnosis following an informative discussion. However, this was not the case for all subjects. A negative impression of hypnosis is encouraged by the typical portrayals of hypnosis in stage performances and media and may deter people from taking advantage of hypnosis when recommended. This study reinforces the view that hypnosis should not be used as an entertainment and that education in hypnosis should be vested in professional organisations.

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