

# AUSTRALIAN JOURNAL OF CLINICAL AND EXPERIMENTAL HYPNOSIS



NOVEMBER 2000

VOLUME 28 NUMBER 2

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Published by

*Australian Society of Hypnosis*

<i>Annual subscription rate:</i>	Australia:	Individuals	\$40.00
		Institutions and Libraries	\$50.00
	Overseas:	Individuals	\$45.00
		Institutions and Libraries	\$55.00
<i>Price per single copy: (including back copies)</i>		Individuals	\$30.00
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## MEASURING DISSOCIATION: COMPARISON OF ALTERNATIVE FORMS OF THE DISSOCIATIVE EXPERIENCES SCALE

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*The dissociative experiences scale (DES), developed by Bernstein and Putnam (1986), is commonly used to measure dissociation in clinical populations. It is often used with non-clinical populations to assess how levels of dissociation co-vary with other psychometric measures. When it is used with non-clinical populations, problems arise because the resulting scores can show severe floor effects and often are highly skewed. To remedy these problems, we developed alternative ways of measuring self-reported dissociative experiences. A form of the DES, in which people were required to rate how often they have each of 28 experiences compared with other people, was superior in avoiding problems of floor effects and skewness. We discuss situations in which this alternative, which we call DES C, is preferred.*

How often do you find that you are listening to someone talk and then suddenly realise that you did not hear part, or all, of what was said? How often do you find that you are accused of lying when you do not think you have lied? These kinds of questions have been posed to people as a means of

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Requests for reprints should be sent to Daniel B. Wright, Department of Experimental Psychology, University of Bristol, Bristol, BS8 1TN, United Kingdom (e-mail: d.b.wright@bristol.ac.uk) or to Elizabeth F. Loftus, Psychology Department, PO Box 351525, University of Washington, Seattle, WA 98195-1525 (e-mail: eloftus@u.washington.edu). Revised 6 April 1998.

We are very grateful to Stephen Anderson for helping to design and process the questionnaires, to Ira Hyman, William Ray, and an anonymous reviewer for useful comments, and to Frank Putnam for sending us much material on the DES.

determining the extent to which they have dissociative experiences. The formal definition of dissociation is an impairment or even complete failure to integrate memories, experiences, actions, and feelings into consciousness.

Measuring dissociation has been of interest to investigators in part because of an increase in the last two decades in the diagnosis of multiple personality/dissociative identity disorder (MPD/DID) and other dissociative disorders (Goff & Simms, 1993). There are several possible reasons for this increase: Dissociative disorders have become more accepted and more easily recognised, changes in society and therapeutic practice have led to a higher prevalence of dissociative disorders, and there has been a substantial increase in the number of misdiagnoses. All explanations might be partially correct. Whatever the explanation, it is clear that many clinical cases display dissociative symptoms (Carlson et al., 1993; Ross, 1997), but so do many non-clinical cases. Kihlstrom, Glisky, and Angiulo (1994; see Ray, 1996; Ross, Joshi, & Currie, 1990, 1991; Vanderlinden, Van Dyck, Vandereycken, & Vertommen, 1991; Vanderlinden, Varga, Peuskens, & Pieters, 1995, and others for supporting data) state that most people have at least a few dissociative experiences. Although they often are not problematic, people who score high within the normal range of dissociation may be particularly susceptible to dissociative disorders if encountering a particular trigger (e.g., trauma) or if placed within particular societal settings.

During the 1980s, it became evident that an easily administered, psychometrically reliable means of measuring dissociation in clinical populations was desirable. Several measures were developed. Bernstein and Putnam (1986) developed the dissociative experiences scale (DES). According to Ross (1997), this is the most widely used self-administered scale and has undergone the most methodological scrutiny. In several studies, the DES has been found to yield high internal reliabilities (above .90 on Cronbach's alpha). It has 28 items (see the Appendix). These items were based mainly on experiences of people who have dissociative disorders and discussions with clinical experts in the field of dissociative disorders. This means that many of the scale items are most relevant for people with dissociative disorders. Some items constitute more everyday dissociative experiences that are likely to occur to many people (e.g., "they are listening to someone talk and they suddenly realise that they did not hear part or all of what was just said" [p. 733]). Bernstein and Putnam (1986, p. 727) stated that the DES offered "a means of reliably measuring dissociation in normal and clinical populations" but acknowledged that using the DES in normal populations "was not its

intended purpose" (Carlson & Putnam, 1993, p. 16).

Respondents to the original DES are asked to place a tick on a 100 mm line to denote what percentage of the time they spend having each of the 28 experiences. One end of the line was labeled 0% and the other 100%. The responses are supposed to be recorded to the nearest 5 mm. They did this, rather than simply asking people whether they ever had the dissociative experience, as is done with Riley's (1988) questionnaire of experiences of dissociation (QED), so that their scale "could reflect a wider range of dissociative symptomatology" (Carlson & Putnam, 1993, p. 16). Many researchers and practitioners found it time-consuming measuring responses to the nearest 5 mm. For this reason, Carlson and Putnam offered an alternative response set. The set for this DES II has 11 options, the percentages 0%, 10%, . . . , 100%. Respondents are asked to circle the appropriate response. Carlson and Putnam and Elliason and colleagues (1994, as cited in Ross, 1997) compared this scale with the original DES and found similar scores. Given its relative ease, it is rapidly gaining in popularity.

Carlson et al. (1991) explored the internal structure of the DES with clinical and non-clinical samples and found three subscales: amnesiac dissociation, absorption, and depersonalisation. These subscales also yield high internal reliability (Dubester & Braun, 1995). When looking just at non-clinical samples, a different factor structure seems to emerge (see Ross et al., 1991). Ray and colleagues (Ray & Faith, 1995; Ray, June, Turaj, & Lundy, 1992) explored the factor structure with university students. They found between four (Ray, 1996; Ray & Faith, 1995) and seven (Ray et al., 1992) factors for the DES. Ross et al. (1991) found three factors using a large general population sample of Winnipeg, Canada. However, Fischer and Elnitsky (1990) found only a single factor for the DES with a non-clinical population.

There are disagreements about the best way to determine the number of factors. Some argue that all factors explaining more variance than the mean variance of the original items (i.e., with eigenvalues greater than 1) should be extracted. Others argue that researchers should use a more subjective method, such as a scree test, in which the proportion of variance accounted for by each factor is compared with the previous and the subsequent factors (see Cattell, 1988). Ultimately, the value of the scree test depends on how clear its representation is.

In most of the studies that used the DES with non-clinical adult samples, the data for individual questions, and for the overall scores, are highly skewed and clustered at the low end of the scale (Ross, 1997; Ross et al., 1991).<sup>1</sup>

Perhaps this is an inevitable consequence of Carlson and Putnam's wish to differentiate among clinical populations and the fact that their questions were constructed from the clinical literature and experiences with clinical samples. After all, even the highest population estimates predict that only a few percent of the population will have dissociative disorders. It is necessary to distinguish this small percentage of people from other people who score high on the DES but are unlikely to have a dissociative disorder; there is no need to discriminate among the majority who score well below any threshold on the DES.

However, the resulting distributions are problematic for exploring how differences in dissociative tendencies are associated with other scales for non-clinical populations. For instance, Faith and Ray (1994) administered a hypnotisability scale and the DES scores to university students and found them essentially uncorrelated. However, it could be that the floor effects of the DES with university students are dampening this correlation. In fact, pooling across 10 studies, Van Ijzendoorn and Schuengel (1996) found that these had a weak relationship (see also Kirsch & Lynn, 1998, for related discussion).

In another study, Hyman and Billings (1998) tried to get people to remember childhood events that never occurred. They found that the probability of a false memory was related to scores on the DES. People with higher scores were more likely to have a false memory. Several other studies have examined the relationship between DES scores and other measures with non-clinical populations. This research reflects the importance many researchers have placed on the effects of dissociative tendencies on many aspects of life. However, psychometric problems with the floor effects and skewness affect the analysis of data such as these. Again, if the DES is to be used as a screening device for dissociative disorders, these characteristics are not problems.

Often it is useful to transform skewed data so that they more closely approximate the normal distribution, an assumption of many statistical tests. The transformations would spread out the data at the low levels relative to data at high levels. This procedure does not overcome the problems of floor effects. With a variable such as reaction time, the researchers would be fairly confident that it is measured accurately and that the difference between two fairly quick times is still meaningful. However, for people who score near the floor on the DES, "small differences among these subjects may not be meaningful" (Carlson

<sup>1</sup> There have been a couple of exceptions. For example, Faith and Ray (1994) administered a slightly modified DES to undergraduates along with the QED and a measure of hypnotisability. Although they do not report the skewness, their data are reproduced in Ray (1996, Figure 1) and do not appear to be highly skewed.



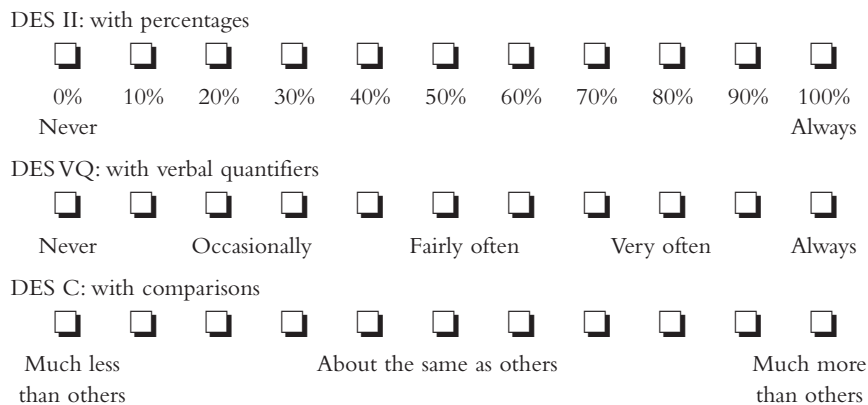
& Putnam, 1993, p. 16). Once the data are transformed, the difference between a total DES score of 5% and 10% is amplified. This difference, which Carlson and Putnam state may not be meaningful, may become far too influential in the statistical analyses. We demonstrate this problem later in this paper. Because of the problems identified using the DES with non-clinical populations, we examined alternative forms of the DES.

## **ALTERNATIVE RESPONSE FORMS**

There are several instruments to measure dissociative tendencies. The most popular self-administered instrument, and one that has undergone the most methodological scrutiny (Ross, 1997), is the DES originally described in Bernstein and Putnam (1986). The original DES and DES II (Carlson & Putnam, 1993) required people to give a percentage for each of the 28 items. This instruction can cause some difficulties. Several of the people in the present study commented afterward that they were confused about how they were supposed to respond. Here is the basic problem. Suppose Mary is asked to provide the “percentage of time” that she thinks she is sometimes listening to someone talk and not hearing part or all of what was said. If she checks 10%, does this mean 10% of waking hours, 10% of the time she is in conversation with others, or 10% of some other period? If she thinks that this happens occasionally, but that it is not a particular problem, how should she respond? Mary’s confusion is readily appreciated.

Our intent was to measure the same basic 28 experiences captured in the original DES, but to leave better psychometric properties for non-clinical samples. In particular, we wanted to avoid the high levels of skewness and the floor effects of the DES and DES II for the reasons described by Carlson and Putnam (1993). Although we could have developed new questions specifically designed for a non-clinical sample, we wanted to keep the same question stems. This allows us to build on the extensive research conducted with the DES. Furthermore, because researchers have only in the last decade begun looking at dissociative tendencies in non-clinical populations, it would have been difficult to construct relevant items. Therefore, only the response format was altered. To allow comparisons with the DES II, both of our alternatives had eleven options. For all three forms, respondents were asked to tick the appropriate box. For our version of DES II, each percentage (0%, 10%, 100%) was directly below a box (see Figure 1).

In the second version, respondents were asked how often each experience happens to them, but instead of using the percentages, five verbal quantifiers

**Figure 1:** Response Formats for the Three DES Versions

(e.g., “never,” “occasionally,” “always”) were placed below the response options (Figure 1). We call this DES VQ. Verbal quantifiers, sometimes called vague quantifiers, are often used in surveys and questionnaires for estimating behavioural frequency when it would be difficult for the respondent to calculate the frequency of the behaviour or where the behaviour is not well defined (Wright, Gaskell, & O’Muircheartaigh, 1994). Given the difficulty in defining some of the experiences in the DES, it is worth exploring this option. Ray et al. (1992) used a form of the DES with only five scale points and the endpoints labelled “not at all” and “all the time.” These verbal phrases, without the numerical percentages, are similar to our alternative, although we used “never” and “always” to label the endpoints, as is done with the DES and DES II. Ray et al. found a less skewed distribution than is usually found with non-clinical populations, so we felt that this alteration might lessen skewness, although changing the number of scale points is also likely to have an effect. They called their scale RDES (research DES) but stated that “no empirical research” (p. 418) existed to suggest that their alterations affected results.

Our third version asks people how often they have these experiences compared with other people (Figure 1). For example, people are told “some people have the experience of finding themselves dressed in clothes that they don’t remember putting on” and asked to “place a cross to show how much of the time this happens to you.” One end of scale has the label “much less than others,” the other end “much more than others,” and the midpoint of the scale “about the same as others.” This format requires people to have or to construct some notion of how often other people have dissociative experiences. We address this requirement further in the discussion.

## EXPERIMENT

### Methods

Seventy-five first-year students participated in the first phase of this study, which took place at the beginning of a psychology lecture at University of Bristol. Each was given a four-page questionnaire. The first page had the word *CONDITION* and a number between one and six on it, which they were told to remember. The next three pages were one of the DES forms. Based on the condition numbers on the front of their questionnaire, one-third of the people received DES II, one-third DES VQ, and one-third DES C.

Two days later, the same students participated in the second phase of the study. This phase was conducted at the start of a regularly scheduled laboratory session. Participants were asked the condition number that was on the front page of the questionnaire they had filled out two days before and were handed the appropriate form by one of the laboratory assistants. Half of the people given DES II in the first phase were given DES VQ and half DES C. For those initially given DES VQ and DES C, half were given DES II and half the alternative form of the DES that they had not initially had. The students then took part in their laboratory session, which covered aspects of sampling and survey design. At the end of the laboratory session, they participated in the third phase of the study. They were given the form that they had not filled out during the first two phases. The six conditions refer to the six possible orders for filling out the three DES forms.

This particular schedule was chosen to try to minimise the effects of people talking with each other while still assuring that the participants were unlikely to remember their responses to individual questions. The data from some participants were eliminated for various reasons. Five students from the first phase were not present at the laboratory session. Two wrongly recalled their condition numbers. The questionnaires were four pages long, including the cover page. Six respondents failed to answer questions on one of the pages for one of the three questionnaires. These 13 cases were excluded, leaving a sample of 62. Of these, 63% said they were female, 36% said they were male, and one person did not indicate his or her gender.

The questionnaires were constructed so that responses could be coded with a computer system and scanner, thus reducing the chance of human coding errors. The questionnaire appearance was designed to match as closely as possible that of DES II (Carlson & Putnam, 1993). However, there were a few

differences. Participants responded by placing a tick in the box above the response rather than circling the response. Also, the phrasing was altered to be consistent with the response options of the different forms. For DES II they were asked to “place a cross to show what percentage of the time this happens to you.” For DES VQ the wording was to “place a cross to show how often this happens to you.” For DES C they were told to “place a cross to show how much of the time this happens to you.” Participants were asked their gender and to write either their name or some sequence of characters that they could remember. They were told this information would be confidential, but was necessary for matching the questionnaires from each phase. Almost all wrote their names.

## Results

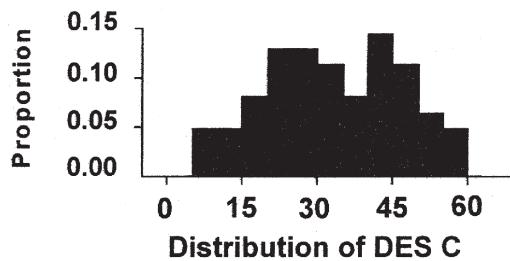
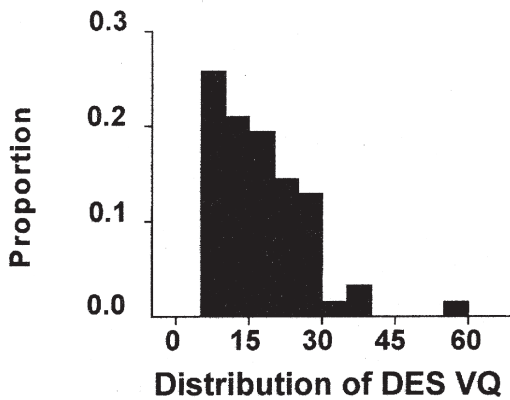
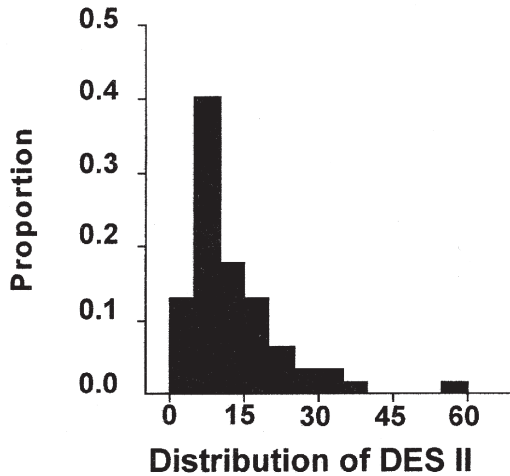
Before exploring differences among the DES forms, we checked to see whether there were systematic differences in responses for the different conditions. No statistically significant differences were found. There were also no differences found between males and females.

## Comparing DES Distributions

Based on previous research (e.g., Ross et al., 1991), we had predicted that DES II would produce a positively skewed distribution. All distributions of individual questions of DES II were positively skewed (minimum skewness 1.10,  $SE = .30$ ; see the Appendix for the means and skewness for all the individual items). Their means were near the lower limit, ranging from a low of 1.8% for question 4, which describes being dressed in clothes that you do not remember putting on, to a high of 28.4% for question 17, which describes becoming so absorbed in the television or a movie that you are unaware of other events. This indicates probable floor effects.

The mean for the total DES II score was  $12.73\% \pm 2.39\%$  (median = 9.29%; range 2.1% to 55.4%; the interval is a 95% confidence interval on the raw data), which is approximately what has been found with other university samples (e.g., Bernstein & Putnam, 1986). The distribution (Figure 2a) is highly skewed (skewness = 2.08,  $SE = .30$ ). Taking the natural logarithm resulted in essentially an unskewed distribution (skewness = 0.11,  $SE = .30$ ).<sup>2</sup> The transformed score will be used in statistical comparisons.

Although we use different response alternatives for DES VQ and DES C, for ease of comparison we report the data from each of our forms as if they

**Figures 2a–2c:** Distributions for DES II, DES VQ, and DES C

were on a 0%-100% scale. Ticking the first box corresponds to 0%, the last box to 100%, and each box between at 10% increments. This allows direct comparisons among the three forms. We first examine the alternative that used verbal (vague) quantifiers. Ray et al.'s (1992) form of the DES used verbal quantifiers but had only five response options. Therefore, we had no clear predictions for skewness. Our form using verbal quantifiers, DES VQ, was skewed. Responses to all the individual items were positively skewed and at least twice their standard errors (minimum skewness = 0.62,  $SE = .30$ ; see the Appendix). The means for the individual questions ranged from 2.6% (being dressed in clothes you do not remember putting on) to 38.4% (driving in a car/bus/subway, and not remembering all or part of the journey). The skewness for the total DES VQ score was 1.54 ( $SE = .30$ ). The natural logarithm transformation reduced skewness to 0.06 ( $SE = .30$ ). The mean for the total score was  $16.94\% \pm 2.35\%$  (median = 15.00%), which is significantly higher than that of DES II,  $t(61) = 5.80$ ,  $p < .001$ , but is not a large difference in substantive terms (less than half the distance between adjacent boxes on the response scale). Floor effects may still be present, but to a lesser degree. The lowest total score for an individual person was 6.1% for the VQ in this sample, compared with 2.1% for DES II.

The comparison form, DES C, fared better with respect to both skewness and floor effects. Only nine individual questions had skewness values twice their standard error (see the Appendix). The highest was only 1.08 ( $SE = .30$ ), which is lower than any of those for the DES II and lower than most of the DES VQ items. The overall DES C was essentially unskewed (skewness =  $-0.12$ ,  $SE = .30$ ). Floor effects were avoided for the most part. The means of the items ranged from 14.4% for question 4 (dressed in clothes you do not remember putting on,) to 52.9% for question 2 (listening to someone talk but suddenly realising that you did not hear what was said). The mean total DES C score was  $33.26\% \pm 3.47\%$  (median = 33.39%; range 5.7% to 57.1%). It is worth noting that this is lower than 50% that would be expected if the sample thought that they were "about the same as others." However, the wording of the questions presents a slight bias. Each question reports that "some people" have the experience and this might have made our participants believe that the experiences were more common than if less biasing phrasing was used. It is difficult to see how this can be avoided because people will assume that these

<sup>2</sup> To illustrate how this transformation gives much importance to small differences at the low end of the scale, the difference between 5% and 10% has the same impact as the difference between 25% and 50% and that between 50% and 100%.

behaviours are relevant to at least some people; otherwise questions would not be asked (see Schwarz, 1995, for further discussion of communication norms in surveys and questionnaires).

### Internal Structure

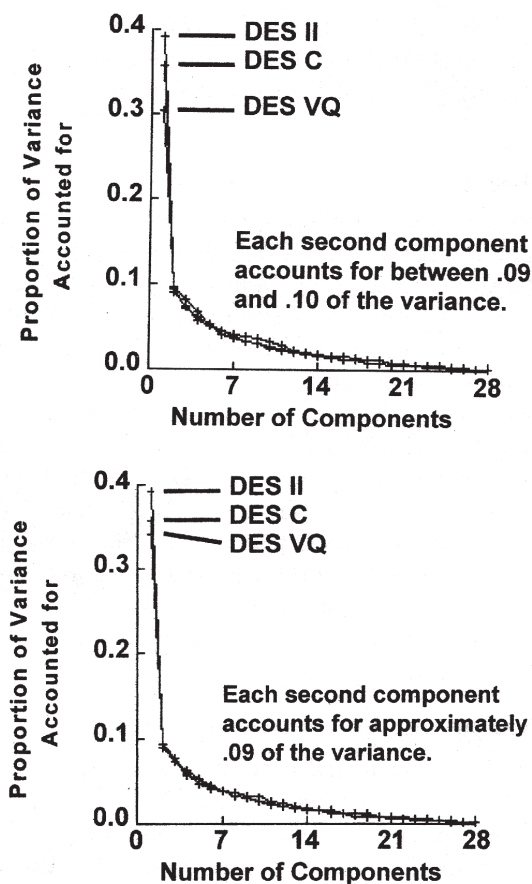
As mentioned earlier, there is some dispute about the factor structure of the DES for clinical and nonclinical samples. Following Wilkinson (1990), principal component analyses were used to explore the internal structure of these forms. The first principal component accounted for 39.2%, 34.0%, and 35.7% of the variation in DES II, DES VQ, and DES C, respectively. Their second components accounted for 8.9%, 9.4%, and 9.3%. The remaining components gradually declined from these values. Inspection of the scree plots (Figure 3a) clearly shows that a single-factor model is optimal for all of these. The coefficients for all items of all three forms were positive.

Some researchers extract all factors with eigenvalues greater than 1. Here this corresponds to about 4% of the total variation. This rule has a couple of disadvantages. It differentiates between factors accounting for similar levels of variation where one has an eigenvalue slightly higher than 1 and the other slightly lower than 1. The criterion also means that as the number of questions goes up, the number of factors is likely to increase even if the same questions are repeated. The main disadvantage of using scree plots is that sometimes they are not informative. Here they are informative and it is clear that there is one factor accounting for much more variation than subsequent factors and there are no striking differences between contiguous pairs of factors.

Because of the skewness for the individual items in DES II and DES VQ it was felt that principal component analyses designed for ordinal data should also be examined. A procedure called PRINCALS (principal component analysis and alternating least squares) was used (see Van de Geer, 1993). The first components accounted for 39.2%, 30.4%, and 35.7% of the variation in DES II, DES VQ, and DES C, respectively. The second for each of these was considerably lower (8.9%, 9.6%, and 9.4%, respectively). These values, and the scree plots shown in Figure 3b, are very similar to those found with classic principal component analyses and all clearly suggest single-factor solutions.

Using a technique related to principal component analysis (Waller & Meehl, 1998), Waller and colleagues (Waller, Putnam, & Carlson, 1996; Waller & Ross, 1997) recently used taxometric analysis to explore whether the amount of dissociative experiences people have lies on a continuum from

**Figures 3a–3b:** Scree Plots for DES II, DES VQ, and DES C, (a) With Classic Principal Component Analyses, and (b) With PRINCALS, a Programme That Can Be Used When Only Assuming Ordinality for the Individual Questions



people who dissociate extremely infrequently to those who dissociate frequently or whether there are distinct groups, or taxa. They observed distinct taxa with both clinical (Waller et al., 1996) and non-clinical groups (Waller & Ross, 1997). Furthermore, they identified a subset of DES items that are particularly good at differentiating people with DID and those without (Waller et al., 1996). Because the observed percentage of people from the general population in the high dissociation taxon is only about 3% (Waller & Ross, 1997), even in our sample of 260 (see below) it is unwise to run such



procedures (see Waller & Meehl, 1998, for a thorough explanation of taxometric procedures and their limitations).

### Internal Consistency

The validity and reliability of a questionnaire are critical for its psychometric value. Carlson et al. (1993) demonstrated the validity of the DES for differentiating various client groups. The internal reliability refers to how well the items, as a group, correlate. Cronbach's alpha is the most reported measure of reliability, and it is usually found to be about .90 or above for the DES.

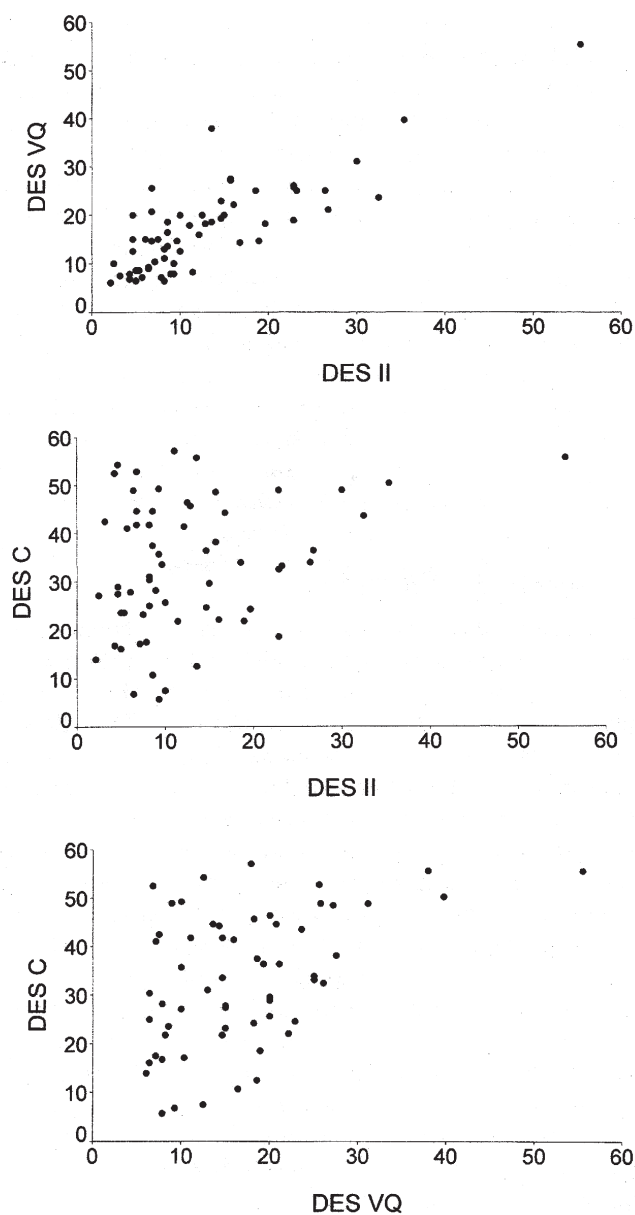
For the forms tested in this study, Cronbach's alpha was .93 for DES II, .91 for DES VQ, and .93 for DES C. This was expected given the good fit of a single principal component. For DES II, the correlation of tile item with the others ranged from .28 to .77. For DES VQ they ranged from .15 to .69, and for DES C from .18 to .80. Some of these scores are fairly low, indicating that if the DES was going to be used solely with clinical populations, then some items might be excluded. Because no subscales were identified with the principal component analyses, no reliability measures on subscales were made.

### Relationships Among the Alternative Forms

Because all the forms tested used the same questions with different response alternatives, we are assured that at some level they address the same set of experiences. Therefore, we would expect the forms to be correlated. Dubester and Braun (1995) found that the correlation between taking the original DES (marking a line) on two occasions was .93 for three different clinical groups. This study provides a rough guide for the maximum possible correlation between our test forms. It is likely that the test-retest correlations would be lower with non-clinical groups because certain clinical groups (those with DID, for example) tend to have *much* higher scores than others. Therefore, they would constitute highly influential, or leverage, points. The observed correlations, after transforming DES II and DES VQ scores with the natural logarithm, were .75 between DES II and DES VQ ( $p < .001$ ), .25 between DES II and DES C ( $p = .05$ ), and .43 between DES VQ and DES C ( $p = .001$ ).

Figure 4 shows the scattergrams comparing these measures (using the untransformed measures to maintain the original scale). Clearly, DES II and DES VQ are highly correlated. Of more interest here is what additional

**Figures 4a–4c:** The Scattergrams of (a) DES II with DES VQ, (b) DES II with DES C, and (c) DES VQ with DES C



discrimination is attained with DES C. Both DES II and DES VQ have most of the sample clustered at the low end (Figures 2a and 2b). Examining Figures 4b and 4c, it is clear that many of these people, when asked how often they have these experiences compared with others, score much higher. The people who score high on DES II and DES VQ still score high on DES C, but DES C discriminates more finely among those who score low on DES II and DES VQ. If DES C were used as a screening instrument and the same threshold were used as is often recommended for DES II (scores above 30%), then this would mean many more people would be advised to have a diagnostic evaluation. However, DES C is not a screening instrument and should not be used as such.

From a psychological standpoint, it is worth delving deeper into the relationships among the different DES forms. The correlation between DES II and DES C, when partialling out DES VQ, is  $-.10$  ( $p = .42$ ). This lack of a partial correlation was expected because although all three measures overlap on the experiences being referred to, DES II and DES VQ both refer to the proportion of time having the experience, and DES VQ and DES C both require interpretation of verbal phrases. The only similarity between DES II and DES C, the actual experiences, is also shared by DES VQ.

### Increasing Sample Size for DES C

DES C appears to have the best psychometric characteristics of the three forms for the population tested. Although that sample size is satisfactory for many comparisons, we thought it would be worthwhile to administer DES C to several additional participants. This allows us to be more confident with our recommendations. The additional participants were sampled from a different group of first-year laboratory students ( $n = 75$ ) and as part of a study on memory to other students ( $n = 121$ ). Combining these data with the other set yields a sample size of 260.

Combining all three samples produced an overall DES C distribution that was essentially unskewed (skewness =  $-0.12$ ,  $SE = 0.15$ ) and is not significantly different from zero (i.e., symmetrical) even with this larger sample size. The mean score was  $36.38 \pm 1.65$ . There still appears to be only a single factor when a principal component analysis is performed on each of the three samples or when they are combined into one larger sample. With the combined sample, the percentages of variance accounted for by the first few principal components are 32.7%, 7.2%, 6.5%, 4.5%, 4.4%, and 3.8%. Although

each of these corresponds to an eigenvalue greater than 1, graphing these values on a scree plot clearly suggests a single latent variable.

## DISCUSSION

In the 1980s there was a clear need for a reliable way to measure the extent of dissociative experiences in clinical samples. Several instruments were created to serve this role. The DES is the most frequently used (Ross, 1997). It is often used as a screening device to see whether more extensive diagnostic instruments should be administered. In the 1990s there was an increased interest in studying dissociative experiences in non-clinical samples. This has been done for two main purposes. The first is to estimate the proportion of people in the population above some cut-off point. Depending on the cut-off point chosen, usually only a few percent of the population would score above this point. Information on the more than 90% of people who are not near this cut-off is not of concern. The DES, which was designed to differentiate among people and groups who dissociate frequently, has been used for this purpose in many surveys.

The second purpose is to examine whether the tendency to have dissociative experiences predicts other measures. For these analyses, researchers are interested in scores throughout the whole range. The DES was not designed for this. The resulting distributions are highly skewed and liable to floor effects, thereby limiting their usefulness with non-clinical samples for this purpose. As Carlson and Putnam (1993, p. 16) pointed out, differences at the low end of the DES scale “may not be meaningful.” When the response format was changed so that participants were asked how often they had these experiences compared with most other people, the observed distribution was unskewed and avoided floor effects. These are important psychometric properties to consider when choosing a particular scale.

This alternative format, called DES C, was compared with Carlson and Putnam’s (1993) DES II. People who scored high on DES II also scored high on DES C, so it does not appear likely that the DES C could fail to detect people who, according to the DES II, dissociate frequently. Of course, exploration with clinical samples is necessary before claims are made about how it will perform with these samples, and as we stressed before, DES C is not intended as a screening device for any clinical disorder. Where DES C differs from DES II is that large numbers of people who scored near the lower limit on DES II were differentiated with DES C. Many people reported that

they did not spend much time dissociating with the DES II, but did feel that their level of dissociating was comparable with that of others, as measured with DES C.

The question of validity is difficult for any scale in a new area (dissociative tendencies with nonclinical samples). Further investigations are necessary to determine how these people perform on related tasks and whether these relationships are congruent with theories of dissociation. Some studies have been conducted using DES C. For example, Heaps and Nash (1997) explored whether imagination inflation (Garry, Manning, Loftus, & Sherman, 1996), in which imagining events makes people think that the events are more likely to have occurred, was related to dissociation as measured with DES C. They found that it was ( $r = .40, p < .005$ ). This result is expected because most theories of dissociation suggest that people who dissociate may have problems differentiating a memory for a real event and one that was just imagined. We also examined a version of the DES in which the response alternatives were verbal quantifiers. Because Ray et al. (1992) found less skewed distributions when using a 5-point scale with verbal quantifiers, we thought that this format might improve these psychometric characteristics. We observed a slightly lower degree of skewness compared with that of DES II. However, this difference was not large enough to justify using DESVQ in lieu of DES II on psychometric grounds.

Other properties are important in choosing a measure. All three forms of the DES that we examined showed high internal consistency, above  $\alpha = .90$ . Principal component analyses were run on all three forms, with both interval and ordinal methods. Scree plots (Figures 3a and 3b) suggested that there was a single underlying trait. Examining these plots, it was difficult to justify additional components. This finding counters some research that has uncovered multiple subscales of the DES. If we had decided to include all components accounting for 1/28 or more of the total variance, more components would have been included. Of course, there may be good theoretical reasons to cluster some of the items. Although the principal component analysis gives no reason to postulate additional factors, the individual items appear distinct enough that researchers should be encouraged to explore whether any groups of items are highly predictive of other measures.

It is worth considering the cognitive processes involved in answering the three forms of the DES that we examined. We have already alluded to some of the problems that are likely to occur trying to figure out what percentage of the time you are having a particular dissociative experience. Clearly, people

are not treating this as an absolute percentage of waking hours. Otherwise, several of the experiences could be added together to get a measure of the overall percentage of time dissociating. If we assume that people can have only one of the 28 dissociative experiences at any given time, then anyone with a total DES II score of 4% or more is dissociating constantly. About 95% of our sample scored above 4%. Clearly this is not occurring, so people are not responding to DES II with absolute percentages.

When filling out DES II, people do not appear to be interpreting the response alternatives as percentages. The processes involved may be very similar to those used when completing DES VQ. This notion is supported by the strong consistency between the scores on these two forms. When responding to questions with verbal quantifiers, people use information about how they think most people behave (Wright et al., 1994). Because people have different beliefs about the behaviour of others, this may introduce some artifactual group differences. These different beliefs are known to create problems comparing across groups (see Schaeffer, 1991, for discussion).

DES C explicitly asks people to make comparisons between themselves and others. Therefore, if people differ in how often they think people dissociate, this may affect responses. Clearly, knowledge about others is based in part on prevalence of dissociation within a given society. For example, the diagnosis of dissociative disorders is more common in the United States and Canada than in the United Kingdom. Also, there is more discussion in the media about dissociative disorders in the United States and Canada. This means that care must be taken in comparing the results across cultures. However, as mentioned earlier, knowledge of other people's behaviour is likely to influence responses on DES II and DES C. There is the additional problem that people might not know how much other people dissociate. It is important in the preamble of the questionnaire to stress that it is asking how much participants think that other people dissociate and that participants should make informed guesses if unsure. In conclusion, we encourage further research examining how people respond to these dissociation questionnaires in order to improve their value for different research and diagnostic purposes.

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## APPENDIX

The means and skewness values for all items for the different forms of the DES. All questions ended with "Place a cross to show how much of the time this happens to you." All these questions are taken from Carlson and Putnam (1993). The standard error of skewness is approximately 0.30.

Questions	DES II		DESVQ		DES C	
	Mean	Skewness	Mean	Skewness	Mean	Skewness
Some people have the experience of driving or riding in a car or bus or subway and suddenly realising that they don't remember what has happened during all or part of the trip	19	1.4	38	0.9	37	0.0
Some people find that sometimes they are listening to someone talk and they suddenly realise that they did not hear part or all of what was said	26	1.1	38	0.6	53	-0.7
Some people have the experience of finding themselves in a place and having no idea how they got there	5	4.0	7	2.7	21	0.5
Some people have the experience of finding themselves dressed in clothes that they don't remember putting on	2	3.6	3	2.0	14	1.1
Some people have the experience of finding new things among their belongings that they do not remember buying	4	4.3	6	4.0	20	0.6
Some people sometimes find that they are approached by people whom they do not know who call them by another name or insist that they have met them before	11	1.9	14	1.7	32	0.2
Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they are looking at another person	7	2.2	9	2.3	30	0.6

Questions	DES II		DESVQ		DES C	
	Mean	Skewness	Mean	Skewness	Mean	Skewness
Some people are told that they sometimes do not recognise friends or family members	3	2.4	4	2.9	21	0.8
Some people find that they have no memory for some important events in their lives (for example, a wedding or graduation)	8	1.1	9	0.8	25	0.4
Some people have the experience of being accused of lying when they do not think that they have lied	8	1.5	14	1.2	31	0.2
Some people have the experience of looking in a mirror and not recognising themselves	6	2.3	6	2.2	22	1.0
Some people have the experience of feeling that other people, objects, and the world around them are not real	9	3.3	12	2.3	30	0.6
Some people have the experience of feeling that their body does not seem to belong to them	5	2.3	8	1.8	24	0.7
Some people have the experience of sometimes remembering a past event so vividly that they feel as if they were reliving that event	15	1.4	18	0.9	40	0.1
Some people have the experience of not being sure whether things that they remember happening really did happen or whether they just dreamed them	21	1.5	27	0.8	49	-0.5
Some people have the experience of being in a familiar place but finding it strange and unfamiliar	9	1.9	12	1.6	30	0.1
Some people find that when they are watching television or a movie they become so absorbed in the story that they are unaware of other events happening around them	28	1.1	35	0.6	53	-0.3

Questions	DES II		DESVQ		DES C	
	Mean	Skewness	Mean	Skewness	Mean	Skewness
Some people find that they become so involved in a fantasy or daydream that it feels as though it were really happening to them	22	1.2	24	1.2	40	0.2
Some people find that they sometimes are able to ignore pain	20	1.3	23	1.2	44	-0.2
Some people find that they sometimes sit staring off into space, thinging of nothing, and are not aware of the passage of time	24	1.6	36	0.4	52	-0.3
Some people sometimes find that when they are alone they talk out loud to themselves	22	1.2	29	0.9	41	0.2
Some people find that in one situation they may act so differently compared with another situation that they feel almost as if they were two different people	19	1.1	25	0.6	41	0.0
Some people sometimes find that in certain situations they are able to do things with amazing ease and spontaneity that would usually be difficult for them (for example, sports, work, social situations etc.)	18	1.5	23	1.1	40	-0.1
Some people sometimes find that they cannot remember whether they have done something or have just thought about doing that thing (for example, not knowing whether they mailed a letter or have just thought about mailing it)	17	1.5	22	0.9	42	-0.3
Some people find evidence that they have done things that they do not remember doing	9	2.8	11	2.4	29	0.3

Questions	DES II		DESVQ		DES C	
	Mean	Skewness	Mean	Skewness	Mean	Skewness
Some people sometimes find writings, drawings, or notes among their belongings that they must have done but cannot remember doing	7	3.1	9	2.8	28	0.6
Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing	5	3.9	8	3.0	22	1.0
Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear	7	3.8	7	3.4	23	1.0
Total DES scores	12.7	2.08	16.9	1.54	33.3	-0.12

## PERCEPTIONS OF ALLEGED SEXUAL ASSAULT DURING THERAPY

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*This study investigated how people perceive the relevance of selected factors in situations of alleged sexual assault during therapy. We focused on the extent to which the presence or absence of hypnosis, the use of force, and client involvement influenced participants' perceptions of constructed cases of sexual assault. Sixty-four individuals read vignettes in which the presence or absence of these factors was manipulated, and they made ratings and judgments about the responsibility, control, and guilt of both therapist and client. When hypnosis was used, participants perceived the client as less responsible and having less control, and the therapist as more responsible. The presence of force led participants to perceive the client as being less responsible for the events; however, when the client was involved in the sexual activity she was perceived as being more responsible and as having more control. These findings are discussed in terms of the general public's perceptions and beliefs about hypnosis and sexual assault, as well as their views of the nature of a therapeutic relationship and the responsibilities of a therapist.*

How people perceive sexual assault during therapy has not been investigated systematically. In such cases, there will be numerous influences on a person or juror's decision as to who or what was responsible for the sexual assault. Hoencamp (1990), for example, argued that factors such as the emotional intensity of the therapeutic relationship, the abuse of authority, the presence of drugs or alcohol, the use of verbal coercion and/or techniques such as hypnosis, the use of physical force, and whether the client becomes actively involved in the sexual act would all influence views about coercive "power" in

a therapeutic setting. Our study investigated the relevance of selected factors in a situation of alleged sexual assault, or “sexual coercion in a therapeutic setting.” We sought to examine the extent to which these selected factors influenced views about the contributory responsibility, control, and guilt of both therapist and client.

People’s perceptions about the factors that may be involved in events such as sexual assault will differ depending on their expectations of, and interactions with, the world (Coates, 1997). If physical coercion is involved, then people may perceive the victim as having less control. However, if there is a power imbalance between the two people involved (such as between a therapist and a client), then verbal coercion or persuasion may be seen to be just as powerful as physical coercion (Hoencamp, 1990). Alternatively, if only verbal coercion is used then people may perceive that a client should be able to exert control when “only words,” rather than physical force, are used. The importance that people attach to the use of physical force will be influenced by perceptions of whether the use of force necessarily constitutes sexual assault; the use of force may not be seen to be as important as other factors such as implied consent, as in cases of date rape (Sawyer, Pinciaro, & Jessell, 1998).

The type and degree of client involvement in the event may also influence people’s perceptions of responsibility and guilt (McConkey & Sheehan, 1995). For instance, people may attribute responsibility to both parties if therapist and client are both active during the sexual act, rather than if the client is passive. However, if the client is passive in the sense that she simply “lies still” during the sexual act, then people may perceive that she is allowing the act to occur. People perceive a woman who either is actively involved in, or who does not resist, a sexual act as essentially consenting to the act. Relatedly, people perceive an alleged rapist as more guilty and attribute less blame to the victim if she verbally or physically resists (Warner & Hewitt, 1993).

A longstanding debate in this area is the role of hypnosis in sexual activity between the rapist and client, and this debate has revolved around beliefs about the effect of hypnosis on voluntariness, control, and capacity to consent (Hoencamp, 1990). Although there is substantial evidence that hypnosis cannot be used to “force” someone to engage in acts against their will (Wagstaff, 1999), McConkey and Sheehan (1995) suggested that when other persuasive influences occur in conjunction with hypnosis, empirical findings that people do not act “against their will” during hypnosis cannot be so easily applied. Also, they emphasised the importance of considering an abuse of trust between therapist and client that results in sex as a distinct category of “hypnotic

coercion.” Hypnosis was one focus of our study because various (Kline, 1972; Perry, 1979) clinical cases appear to show that hypnosis can be used to “coerce” sexual activity (Kline, 1972; Perry, 1979). At the very least, hypnosis may heighten processes, such as transference, that can influence coercive behaviour or response to coercion (Orne, 1972).

Sexual assault has occurred in various therapeutic relationships and factors such as physical force, client participation, and hypnosis have been said to play a significant role, as highlighted by various case studies (e.g., see Conn, 1972; Hartland, 1974; Hoencamp, 1990; Judd, Burrows, & Bartholomew, 1986; Kline, 1972; Laurence & Perry, 1988; McConkey & Sheehan, 1995; Perry, 1979, 1992; Venn, 1988). Hoencamp (1990) documented how several clients in the Netherlands went along with a (hypno) therapist’s sexual activity because they thought it must be normal treatment. Perry (1979) reported an Australian case of alleged sexual assault in which the victims were, to some degree, active participants. A lay hypnotist, Palmer, met three women at a party where he demonstrated hypnotic techniques; on subsequent occasions he had sexual contact with them during hypnosis (Perry, 1979, 1992). Palmer claimed that the women engaged actively in sexual relations and one of them admitted that she had masturbated Palmer. The women claimed either no recollection of the sexual contact or that they were aware but could not resist. Also in Australia, Judd et al. (1986) reported two cases where the victims were passive. In *R v. Davies*, a client testified that she was aware of what was occurring during hypnotherapy but she did not object: “as far as I was concerned when he said ‘I’m only touching your stomach,’ my stomach would tingle and I would think ‘Yes, he’s only touching my stomach,’” when in fact he was sexually assaulting her. McConkey and Sheehan (1995) reported a case in which a taxi driver who had knowledge of hypnotic techniques allegedly committed sexual assault on a hypnotised woman. The woman initially recalled nothing of this particular interaction, but subsequently recalled the taxi driver saying her arms would become heavy during hypnosis and she would not want to move them.

Cases such as these lead to a focus on three specific factors — hypnosis, force, and client involvement. In our study, we presented participants with vignettes involving alleged sexual assault in a therapeutic setting and asked them to make ratings and judgments based on the information they were given. By manipulating the presence or absence of hypnosis, force, and client involvement we determined how these factors were perceived. We used four vignettes because this was the minimum needed to make three planned

comparisons: hypnosis versus no hypnosis, force versus no force, and client's active versus passive involvement. Throughout the four scenarios we held the therapeutic relationship constant, with a male therapist and female client because this reflects most cases.

We asked participants to rate the responsibility, control, and guilt of the therapist and client in each scenario. By looking at the planned comparisons in relation to these ratings we investigated whether the presence of hypnosis, the use of force by the therapist, and the client's type of involvement separately influenced the way in which people perceived the events. Because the context was a therapeutic setting, we anticipated that participants would rate the therapist higher than the client on the measures of responsibility and control. We expected that the presence of hypnosis and/or force would result in lower ratings of responsibility and control for the client, compared to scenarios in which these factors were absent. Also, we expected that the client's active involvement would lead to higher ratings of client responsibility and control compared to when she was passive. In regards to the therapist, we predicted that hypnosis and force would lead to the therapist being seen as more responsible and in control of the events as compared to when these factors were absent. Conversely, we predicted that responsibility and control would be lower for the therapist when the client was active than when she was passive. Finally, we expected that the use of hypnosis and/or force would lead to deciding the therapist was "guilty" whereas the client's active involvement would lead to a higher rate of "not guilty" decisions.

## **METHOD**

### **Participants**

Sixty-four (34 male and 30 female) individuals in the age range 18–65 years ( $M = 32.89$ ,  $SD = 12.70$ ) were selected randomly from the general public and took part in the study voluntarily. These individuals were from a variety of backgrounds and occupations and were approached by the investigators and their associates to take part in research involving judgments about events associated with therapy. Ninety-eight people were approached in their homes and workplaces and 64 (i.e., 65%) agreed to complete the questionnaire.

### **Questionnaire**

The questionnaire was developed for this study. The cover sheet informed participants they would be presented with scenarios based on events that



occurred in therapy. They were asked to read each of the four scenarios at least three times, and then to make ratings and judgments about the events. They were told to respond only to the evidence in the scenario and to read and rate the scenarios in the order presented. Four vignettes were developed and used.<sup>1</sup> There were four different orders (ABCD, BDAC, CADB, DCBA) of presentation and participants were assigned randomly to one of the four version orders; approximately equal numbers of participants were tested in each order (ABCD = 16, BDAC = 17, CADB = 15, DCBA = 16). Three independent variables were manipulated in the scenarios: hypnosis, physical force, and client's involvement. In Scenario A hypnosis was absent, physical force was absent, and the client was active; in Scenario B hypnosis was present, physical force was present, and the client was passive; in Scenario C hypnosis was present, physical force was absent, and the client was passive; and, in Scenario D hypnosis was present, physical force was absent, and the client was active. Every other aspect of the vignettes was similar (i.e., therapeutic relationship, the client's response following the events, and the therapist's admission of the sexual encounter stating it was consensual) with the exceptions of names, ages and presenting problem (depression or anxiety), which varied slightly across the scenarios. The design allowed three planned comparisons: hypnosis versus no hypnosis (Scenario A versus D); force versus no force (Scenario B versus C); and, the client's active versus passive involvement (Scenario C versus D).

<sup>1</sup> The four vignettes took the following form, with the presence or absence of the three independent variables manipulated and other aspects held constant, with the exceptions of names, ages, and presenting problem (Scenario B — hypnosis present, force present, client passive):

Linda Jones, a 27-year-old single woman, had been experiencing anxiety for some months. After talking to a friend Linda sought help from Gary Harvey, a 34-year-old psychologist in private practice in the suburb where Linda lived. At the first session they discussed the presenting problem and Linda felt that Gary could indeed help her. At the second and third sessions, Gary used hypnotic techniques to help her relax and explained that he commonly used these techniques to alleviate emotional difficulties, along with other counselling methods. The events in question allegedly took place at the fourth session, during hypnosis. Linda recalls Gary saying "You are feeling very attracted to me and we are going to have sex today." Gary stated that Linda was not active during sexual intercourse but "just lay there" and said nothing as he penetrated her. According to Linda's statement of complaint she could not remember much from the fourth session until she arrived home. When her flatmate asked, "Are you alright?" Linda started to cry. After going into her bedroom Linda felt physically ill at the thought that she had experienced sexual intercourse with her therapist. After talking to her flatmate she decided to call the police. Medical examination confirmed that sexual intercourse had taken place and there was evidence of physical force consistent with being held down. Linda reported that the sex was not consensual. When police confronted Gary he did not deny the sexual encounter and stated that the sex was consensual.

Four questions regarding the therapist’s and client’s responsibility and control in each scenario followed each vignette. Ratings on these items were on a 10-point Likert scale where 1 = not at all and 10 = completely. Also, participants were asked whether they would find the therapist guilty of sexual assault (yes or no) if they were acting as a juror in court. They were then asked via an open-ended question to list the three main factors that influenced their decisions. After all four vignettes and ratings, the participants were asked if they had ever experienced hypnosis.

RESULTS

Initial analyses indicated that the order of presentation, sex of participants, and the participants’ experience with hypnosis did not influence the pattern of ratings. Thus, these variables were not considered further. Table 1 presents the mean ratings of responsibility and control, and the percentage of guilty verdicts.

For the planned comparisons of hypnosis (Scenario A versus D), force (Scenario B versus C), and involvement (Scenario C versus D), paired *t*-tests were conducted to compare ratings of the 10-point scales for responsibility and control. For Scenario A versus D (no hypnosis versus hypnosis), the responsibility attributed to the therapist was higher when hypnosis was present,  $t(63) = 3.41, p < .001$ . There was no difference in ratings of control for the therapist between these scenarios. Further, a lower level of responsibility,  $t(63) = 5.35, p < .001$  and control,  $t(63) = 6.14, p < .001$  was attributed to

**Table 1:** Mean Ratings of Responsibility and Control for Therapist and Client, and Percentage of Guilty Verdict for Therapist

	Scenario			
	A	B	C	D
Therapist				
Responsibility	9.13 (1.35)	9.72 (1.06)	9.75 (0.59)	9.66 (0.70)
Control	9.72 (0.65)	9.86 (0.30)	9.86 (0.30)	9.81 (0.50)
Guilty Verdict	53.1%	96.9%	92.2%	85.9%
Client				
Responsibility	4.27 (2.90)	1.69 (1.11)	1.97 (1.39)	2.52 (1.12)
Control	4.86 (2.88)	2.06 (1.47)	2.27 (1.75)	2.69 (2.30)

*Note.* For ratings of responsibility and control, 1 = not at all and 10 = completely. Standard deviations appear in parentheses.

the client when hypnosis was present. Participants were more likely to find the therapist guilty when hypnosis was present rather than absent,  $\chi^2(1, N = 128) = 16.26, p < .001$ . For Scenario B versus C (force versus no force), the comparison of responsibility and control for the therapist between the scenarios was not significant. When force was present, participants gave a lower rating of responsibility but not control for the client,  $t(63) = 2.94, p < .01$ . There was no significant difference in the rate of guilty verdicts between these scenarios; that is, the presence or absence of force did not influence perceptions of the therapist's guilt. For Scenario C versus D (passive versus active involvement), when the client was active rather than passive in the sexual activity, the ratings were not significantly different for the therapist. However, the client was seen as more responsible,  $t(63) = 3.31, p < .01$ , and more in control,  $t(63) = 2.47, p < .05$ , when she was active. The difference between the guilty verdicts for Scenarios C and D was not significant; that is, the level of involvement of the client did not influence perceptions of the therapist's guilt.

A consideration of the responses to the open-ended question ("What are the three main factors that influenced your decision/guilt?") indicated that participants frequently mentioned factors to do with hypnosis, use of force, and the client's involvement, as well as the therapeutic relationship itself, as the factors that influenced their decision. For example, comments included "his conduct was unethical he abused her trust," "he used a position of power for his own purpose," "under hypnosis she had no control," "you can instruct people to behave a certain way under hypnosis," "no force suggests consent," "her silence implied acceptance," and "it was mutual because of her active participation." A theme in these comments was that the breach of the therapeutic relationship itself was a major factor in determining the therapist's guilt.

## DISCUSSION

We investigated people's perceptions of hypnosis, force, and client involvement in constructed cases of sexual assault in therapy. We found that when hypnosis was used participants perceived the client as less responsible and having less control, and the therapist as more responsible. Further, the therapist was more likely to be seen as guilty of sexual assault when hypnosis was present rather than absent. Inferences drawn from the findings and supported by participants' comments indicated that hypnosis was seen to cause a person to lose control

and that behaviour can be dictated during hypnosis. The presence of force led participants to perceive the client as being less responsible for the events; however, when the client was involved in the sexual activity she was perceived as being more responsible and as having more control. Notably, participants rated the therapist as having more control and responsibility than the client over the events in every scenario, regardless of the manipulation of the variables. This reflects the overriding influence of the perception of therapeutic responsibility.

Our findings indicate that people's perceptions of the given events were influenced greatly by the therapeutic context. This is consistent with available case studies, which suggest that when sexual activity occurs in therapy (whether "consensual" or not) it is perceived not only by the "victim," but also by third parties, as occurring primarily because of the power imbalance between therapist and client. Hartland (1974), for instance, documented a case in which a woman alleged she had been sexually assaulted by an obstetrician who had used hypnosis. She claimed that during an examination she had not been hypnotised as he intended, but she had complied with the doctor's suggestions because she was terrified of him. As in the Palmer case (Perry, 1979), the relationship in the vignettes that we constructed was not intensely emotional or long-term. Nevertheless, our participants perceived the sexual activity as a "betrayal" of therapeutic trust as reflected in their comments to the open-ended question. That a trust had been violated was one of the most salient factors in the present research, and this supports McConkey and Sheehan's (1995) distinction of the special nature of "coercion" in therapy whether hypnotic or not. Future research could usefully examine the differences between sexual activity scenarios that occur in therapy and those that occur in contexts that do not have a "duty of care."

Over and above the therapeutic context, one major finding was the strong effect of the presence of hypnosis. The therapist was viewed as more culpable when hypnosis was employed than when it was not. Many participants believed that the therapist took "total control" over the client when he used hypnosis. This is consistent with the general public view that hypnosis causes loss of control and involuntariness, but is not consistent with scientific findings about hypnosis (Labelle, Lamarche, & Laurence, 1990; McConkey & Jupp, 1985; Perry, 1992; Spanos, Gwynn, & Terrade, 1989; Wagstaff, 1999; Wagstaff, Green, & Somers, 1997). Until now, however, there has been little research on people's perceptions of crimes committed against a hypnotised person. Consistent with Wagstaff et al. (1997), our findings support previous data that

people perceive a person to be less responsible for their actions during hypnosis. This implies that, despite empirical indications to the contrary (Laurence & Perry, 1988; McConkey & Sheehan, 1995; Perry, 1979), participants perceive hypnosis as significant in determining role responsibilities.

Force was seen to be relevant over and above the factors of hypnosis and the therapeutic setting. Whereas the number of guilty verdicts was no different between the force and no-force scenarios, the ratings suggest that the client was seen as less responsible when coerced by physical rather than by verbal means. Relatedly, Warner and Hewitt (1993) found that when a victim was held down and struggled during a sexual assault, people perceived the victim's consent as lower than when only verbal coercion was used (see also Sawyer et al., 1998). The placing of our scenarios within the context of therapy makes the distinction between verbal and physical coercion difficult to discern, and future research could focus on the nature of the relationship and how this might influence the ways in which different types of coercion are used.

Our study was heuristic in approach and is limited in various ways. We focused on three factors as independent variables, looked only at each in isolation, and did not examine any interaction effects among them. In addition, there may have been other factors that could have impacted differently on people's perceptions of the given event. For instance, the presence of internal motivations of the client, the intoxication of the client, or the creation of specific delusions through the use of hypnosis could have been included (McConkey & Sheehan, 1995; Perry, 1979). Also, our dependent variables may not have been adequately sensitive to the effects. One indicator of this was the presence of ceiling and floor effects. That is, in every scenario the therapist was rated as highly responsible and in control while the client was considered as having close to no responsibility. This could be overcome in future by selecting dependent variables that allow room for the measurement of differences across conditions. Our study may have been limited also by a within-subjects design. Although there was no order effect, having every participant read all four scenarios might have resulted in a different effect than if each had only been given one scenario and the analysis was between-subjects. As only four vignettes were developed, this may have limited the findings in that the conditions of force and involvement were all contained within vignettes that involved the use of hypnosis. That is, since hypnosis had such a strong effect on participants' perceptions it may have "leaked" across their perceptions of use of force and the client's involvement. Future research could use more

vignettes that involve the manipulations of force and client involvement without the use of hypnosis.

One innovation of the study was the development of vignettes and rating scales to study people's perceptions about the factors involved in events such as sexual activity in therapy. This method offers a potentially useful way of clarifying people's perceptions and casual attributions. Another strength of the study was its representativeness in the use of a community-based sample of participants as opposed to a convenience sample of undergraduate university students (see McConkey & Jupp, 1985; Wagstaff et al., 1997). Our findings show that the general public perceives hypnosis, force, and the therapeutic relationship itself, to be salient coercive mechanisms in terms of their impact on the control and responsibility of the therapist and the client in cases of alleged sexual assault in therapy. Overall, our study gives an understanding of the ways in which people perceive hypnosis, force, and client involvement in cases of sexual activity in a therapeutic setting and points us in a direction for future research.

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## SELF-HYPNOSIS REVISITED: MUCH ADO ABOUT NOTHING

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*With recent advances in the field of psychoneuroimmunology (PNI), the ability of the mind to influence autonomic nervous system functions has created renewed interest in self-hypnosis and its ability to promote immune system enhancements and to support wellness. With such interest being shown in self-hypnosis, it is useful to review the conceptual framework which underpins our understanding of self-hypnosis and revisit the question which has long baffled researchers: Is self-hypnosis essentially the same as hetero-hypnosis? While advances have been made in our understanding of some of the differences between hetero-hypnosis and self-hypnosis, existing research is unable to demonstrate that self-hypnosis is essentially different from hetero-hypnosis.*

Although Ruch (1975) noted that self-hypnosis has a history at least as old as hetero-hypnosis, most time and attention has gone into hetero-hypnosis. The spiralling costs of health care and medical intervention have highlighted the need for briefer, more effective approaches to treatment and one of these responses has been an increase in the application of self-hypnosis to enhance therapeutic work. Despite the increasing use of self-hypnosis, in the last decade there has been little research to specifically clarify whether self-hypnosis is conceptually and functionally different from hetero-hypnosis. Whereas the elements of hetero-hypnosis have been operationally defined, with considerable consensus that the Stanford scales (Weitzenhofer & Hilgard, 1959, 1962, 1967) and their variants accurately measure the distinguishing features of hypnosis, in the area of self-hypnosis such an evolving, empirical consensus has not yet emerged (Orne & McConkey, 1981). This article seeks to review our understanding of self-hypnosis and to consider the current state of play of self-hypnosis research. There is a prevailing myth that there is such a “thing” as



self-hypnosis which is distinct from hetero-hypnosis. There seems to be a comfortable complacency in assuming that the body of hetero-hypnosis research can be relevantly applied to self-hypnosis. The major purpose of this article is to re-open the central question in self-hypnosis research: Is self-hypnosis essentially the same phenomenon as hetero-hypnosis?

## **DEFINING SELF-HYPNOSIS**

Researchers into self-hypnosis have tended to approach the area on the basis of their own interpretations of the meaning and clinical use of self-hypnosis. Operationally, self-hypnosis has been anything from daily use of a pre-recorded tape to extensive hours of supervised training and practice in the techniques. It comes as no surprise then that there is a wide range of definitions of self-hypnosis in the literature and a similar variability of research analysis and clinical practice. There is very little consensus as to the operational definition of what is covered by the term self-hypnosis.

In practice, there are two possible sources of the stimulus which leads to an experience of hypnosis — self or other. Thus hypnosis is an event that can be initiated by the input from an outside person (hetero-hypnosis) or without such aid being present (self-hypnosis). At one end of the scale, authentic hypnosis can be considered to occur only in the dyadic interaction between hypnotist and subject, and thus all subsequent hypnotic behaviours, even those self-initiated, are viewed as complex hetero-hypnotic suggestions. Within this framework, self-hypnosis is considered to be an outgrowth of hetero-hypnosis if any assistance or information has ever been provided. In effect, this is “self applied hetero-hypnosis.” Hetero-hypnosis has been conceptualised as a condition in which an individual responds to suggestions from a hypnotist, with alteration of perception, sensation, behaviour, and/or memory (Orne & McConkey, 1981) and it forms the conceptual and empirical baseline from which to approach self-hypnosis (Fromm, Brown, Hurt, Oberlander, Boxer, & Pfeifer, 1981).

On the other side of the debate is the proposition that all hypnosis is self-hypnosis. The recent emphasis on “naturalistic approaches” to hypnotherapy closely associated with the Ericksonian movement (Erickson, Rossi, & Rossi, 1976) has seen a shift in focus to the experience and capacities of the individual, with an external hypnotist providing support for the patient’s capacity to enter and experience trance.

Conventionally, the condition thought to be sufficient for defining self-

hypnosis has been that of self-directed responses, even if these are learnt initially from an external hypnotist. However, the experimental literature ranges across a number of experimental conditions defined as self-hypnosis, including subjects alone in a room reading a detailed induction procedure to themselves (Shor & Easton, 1973) and subjects undertaking self-hypnosis in the presence of an experimenter who was either silent (Johnson & Weight, 1976) or who gave some form of instruction (Ruch, 1975). Fromm et al. (1981) used a more unstructured form of self-hypnosis. Their subjects were encouraged to discover their own self-initiated suggestions for entering self-hypnosis trance. However, as they were all exposed to three different measures of standard laboratory hypnosis scales prior to the self-hypnosis component, it is likely that the standard scales had a major influence on the process used for self-hypnosis.

## **RESEARCH SPECIFICALLY ADDRESSING SELF-HYPNOSIS VERSUS HETERO-HYPNOSIS**

In the 1970s, researchers attempted to ascertain whether self-hypnosis was fundamentally different from hetero-hypnosis. Traditionally, research into self-hypnosis has focused on either readily observed behaviours (Johnson, Dawson, Clark, & Sikorsky, 1983; Johnson & Weight, 1976; Ruch, 1975; Shor & Easton, 1973) or phenomenological themes (Fromm et al., 1981; Kahn et al., 1988; Lombard et al., 1990).

Ruch (1975) set out to develop a quantitative measure of self-hypnosis and used it to investigate the effectiveness of self-hypnosis, both without any prior training and following hetero-hypnosis. He considered self-hypnosis to include both self-induced states modelled from hetero-hypnosis, as well as those which are totally self-taught. He found that the initial hypnotic experience affected later responsiveness to other hypnotic modes. For instance, initial conventional hetero-hypnosis inhibited later self-hypnosis, whereas initial self-hypnosis facilitated later hetero-hypnosis. This order effect was based on both behavioural ratings and subjective impact assessments. He concluded that hetero-hypnosis experiences with the hypnotist defined as the active agent inhibits a redefinition of the mindset necessary for self-hypnosis. Ruch (1975) questioned the notion that self-hypnosis is a derivative of hetero-hypnosis and argued for a reconceptualisation in which self-hypnosis is the primary phenomenon and hetero-hypnosis is in fact guided self-hypnosis. Johnson (1979) corroborated the Shor and Easton (1973) and the Ruch (1975) findings

that neither type of induction (self-hypnosis or hetero-hypnosis) is clearly superior in producing general hypnotic behaviour in inexperienced subjects and that self-hypnosis and hetero-hypnosis are essentially similar on behavioural measures. However, Johnson's (1979) study did not support Ruch's (1975) finding on the order of the initial experience of hypnosis on subsequent responsiveness.

Johnson et al., (1983) set out to address unresolved questions about the effect of order of presentation of hypnotic experience, as well as to investigate the effect of female versus male hypnotist on hypnotic response. Their results were in agreement with other studies (Johnson, 1979; Ruch, 1975; Shor & Easton, 1973) which found that self-hypnosis and hetero-hypnosis generally yielded similar behavioural and experiential responses. Also similar to Ruch (1975) and Johnson (1979), they found that the second hypnotic experience had less impact than the first, yet there was some aspect of self-hypnosis, whether presented first or second, which mitigated the decline in the second experience. Their results are in agreement with Johnson's (1979) notion that it is the "active involvement" element of self-hypnosis that makes it less susceptible to order effects. This explanation is in line with Ruch's (1975) facilitation effect of initial self-hypnosis on hetero-hypnosis. However, Johnson et al. (1983) questioned whether initial self-hypnosis actually improves later hetero-hypnosis performance or just helps to maintain it. With respect to the effect of gender of the hypnotist on performance, they found no significant effect.

Despite widespread clinical use of audio tapes to assist the process of self-hypnosis, only one study has addressed whether tape-assisted self-hypnosis is different to self-directed self-hypnosis. Consistent with earlier studies, Hammond, Haskins-Bartsch, and McGhee (1988) found no differences on behavioural responsiveness between hetero-hypnosis, audiotape-assisted self-hypnosis, and self-directed self-hypnosis for inexperienced subjects, newly trained in hypnosis. However, experiential ratings consistently evaluated hetero-hypnosis as superior to either tape-assisted self-hypnosis and self-directed self-hypnosis. Subjects also reported greater confidence and enjoyment using audiotape-assisted self-hypnosis rather than self-directed self-hypnosis, with greater concentration, absorption, and imagery.

Overall, research on behavioural and observable outcomes (Johnson et al., 1983; Johnson & Weight, 1976; Shor & Easton, 1973; Ruch, 1975) found that self-hypnosis and hetero-hypnosis were essentially similar for standard laboratory tasks.

Even though the physiology of hypnosis has been of interest to investigators since the early 1900s, a physiological delineation of the state of hypnosis has not been established. Research has been unable to determine whether hetero-hypnosis is superior to self-hypnosis in altering body physiology. Physiological measures which are produced by hetero-hypnosis suggestions seem to be just as amenable to self-hypnosis suggestions. Technological developments in EEG recording and analytic techniques have allowed a resurgence of interest in brain dynamics associated with hypnosis (Crawford, 1994). While some interesting trends in our understanding of the underlying brain correlates of hypnosis have been found, a definitive EEG base signature for hypnosis and hypnotisability are not yet established (DePascalis, 1999). To date, there is no research that has differentiated the electrocortical correlates of self-hypnosis as opposed to hetero-hypnosis.

## **PHENOMENOLOGICAL STUDIES — THE CHICAGO PARADIGM**

A significant departure from the methodology of other studies was the phenomenological approach adopted by Fromm et al. (1981). This approach considered the behavioural aspects of self-hypnosis to be less important and designed an experiential methodology which encouraged more latitude and personal style in the experience of self-hypnosis. This research, which spanned two decades, came to be known as the Chicago paradigm (Kahn & Fromm, 1992). Differing from previous research approaches, the self-hypnosis at the focus of this research was entirely self-initiated. Subjects were selected on the basis of high hypnotisability and freedom from psychopathology, and they were instructed to find their own best way into trance. They practised self-hypnosis alone for one hour daily in a laboratory room and recorded their experiences in a diary. Care was taken to give no directions for the type of diary recording to make, and this was thought to encourage subjects to define their own experience.

Using the phenomenological approach, Fromm and her colleagues (Fromm et al., 1981; Kahn et al., 1988; Kahn & Fromm, 1992; Lombard et al., 1990) found that self-hypnosis, as practised by subjects with high hypnotisability, is qualitatively different from hetero-hypnosis, a difference which cannot be assessed purely by behavioural measures. They suggested that there appear to be two structural factors that differentiate self-hypnosis experiences from hetero-hypnosis. In self-hypnosis, expansive free-floating attention and ego

receptivity are present, in contrast to hetero-hypnosis, where the direction of an external hypnotist focuses attention and receptivity to stimuli to a single outside source. Interestingly, whereas self-hypnosis was usually reported as feeling more creative and active than hetero-hypnosis, the most important cognitive mode, which underpinned expanded attention and heightened imagery, was an ego-receptive mode. Also at the core of self-hypnosis was increased production of spontaneous visual imagery with themes that included personal associations, memories, problems, and fantasies. This imagery was such a strong factor in self-hypnosis that it was suggested that it constituted a marker for self-hypnosis (Lombard et al., 1990).

The intensive studies from the Chicago group also indicate personality differences in the type of person who is best able to utilise self-hypnosis. Spontaneous individuals with openness and acceptance to experience, emotions, and internal impulses are more likely to be candidates for effective use of self-hypnosis. Overall, the phenomenological studies indicate that self-hypnosis is qualitatively different from self-hypnosis, at least for highly hypnotisable subjects. It is important to mention that this research was set up to study the maximal self-hypnosis experience and thus subjects were highly motivated, trained, and highly hypnotisable and procedures were geared to maximise differences between self-hypnosis and hetero-hypnosis. In fact, Johnson (1981) has claimed that the instructions to go beyond previous hypnotic hetero-hypnosis experience and try new things in self-hypnosis may have actually created artifactual differences which do not reflect the true picture.

## **SELF-HYPNOSIS IN THE RECENT RESEARCH LITERATURE**

Self-hypnosis appears to be used with increasing frequency for a range of clinical conditions. Although the clinician defines the condition as self-hypnosis, we have no way of knowing that what subjects experienced was in fact self-hypnosis rather than hetero-hypnosis. For instance, Taylor (1995) found that 10 HIV positive men trained in progressive muscle relaxation, EMG biofeedback, meditation, and self-hypnosis showed improvements in T-cell counts, anxiety, mood, and self-esteem. Similarly, a clinical study of women with terminal cancer who attended group therapy and utilised self-hypnosis for pain management lived almost twice as long as a control group (Spiegel, Bloom, Kraemer, & Gottheil, 1989). Hypnotic intervention, including

self-hypnosis, usually in the form of an audiotape for daily practice, has been found to be effective in the treatment of asthma (Ewer & Stewart, 1986), duodenal ulcers (Colgan, Faragher, & Whorwell, 1988) and refractory fibromyalgia (Haanen et al., 1991). Clinical applications of self-hypnosis with children have reported successful outcomes in work with chemotherapy (Hockenberry-Eaton & Cotanch, 1989), migraines (Olness, MacDonald, & Uden, 1987) and direct attempts to influence immune system parameters (Olness, Cuthbert, & Uden, 1989).

Other studies have shown that self-hypnosis has a productive role to play through its ability to change immune system parameters. Hall, Minnes, Tosi, and Olness (1992) found that subjects were able to differentially increase the “stickiness” of just one particular type of white blood cell through visualisation and self-hypnosis. Ruzyla-Smith, Barabasz, Barabasz, and Warner (1995) demonstrated significant alteration of immune system response as measured by B-cells and helper T-cells for high hypnotisables under self-hypnosis conditions.

## GENERAL DISCUSSION

Overall, there are findings that indicate important differences and similarities between self-hypnosis and hetero-hypnosis. In both, subjects experience a degree of absorption in the experience and a fading of the generalised reality orientation (Fromm et al., 1981). However, phenomenological research found indications that individuals responded differently to self-hypnosis and hetero-hypnosis (Fromm et al., 1981, Johnson, 1979, 1981).

One way to approach the relationship between self-hypnosis and hetero-hypnosis may be to consider Brown's (1992) specificity theory of hypnotic responsiveness which proposes that within a general factor of hypnotisability or hypnotic responsiveness, there exist specific sub-talents. Thus hypnotic behaviours such as ideomotor responses or age regression can be considered as sub-talents and a given subject may be more or less talented in specific areas. Fromm et al. (1981) have noted that even in highly experienced, highly susceptible subjects, self-suggested age regression and positive and negative hallucination tasks were rarely successful. Similarly, within the domain of hypnotic responsiveness, the ability to enter trance through self-hypnosis or hetero-hypnosis may be considered as sub-talents of general hypnotic skill.

Consistent with this theory, Evans (1991) has suggested that the ability to experience hypnosis is part of a larger dimension of cognitive functioning

which includes a general ability to access, regulate, and alter states of consciousness. Perhaps neither self-hypnosis nor hetero-hypnosis is the primary phenomenon, but rather they can be seen as special talents, two pathways to the same garden called hypnosis, which lies within a larger mindscape, the ability to shift cognitive state.

Whether we focus on subjective experience or behavioural measures, the central key question remains. Is self-hypnosis essentially the same phenomenon as hetero-hypnosis? Can the body of hetero-hypnosis research be directly applied to self-hypnosis? For instance, from hetero-hypnosis research we know that hypnotisability is an important factor in hypnotic experience. With the focus of the research on either highly hypnotisable individuals to maximise differences (Fromm et al., 1981; Kahn et al., 1988; Lombard et al., 1990) or on studies with naïve subjects which did not address differences across the hypnotisability range (Johnson, 1979; Johnson & Weight, 1976; Ruch, 1975; Shor & Easton, 1973) it is hard to know whether hypnotisability is an important factor in self-hypnosis as so little attention has been paid to subjects with medium to low hypnotisability. Use of naïve subjects may have confounded results by failing to take into account plateau susceptibility (Shor, Orne, & O'Connell, 1962) which suggests that many individuals do not reach their optimal degree of hypnotisability in one session and thus require more than one experience of hypnosis to reach their maximum potential. Fromm et al. (1981) reported that with daily self-hypnosis practice over a four-week period, subjects showed adaptation to their internal milieu. Initial disorientation, anxieties, and doubts gave way to confidence and skill in entering self-hypnosis. As with hetero-hypnosis, it is probable that each person has a maximum latent talent or hypnotisability, beyond which no amount of time, expertise, training, or attention will bring a substantial increase in self-hypnosis ability.

## **CONSIDERATIONS FOR THE CLINICAL USE OF SELF-HYPNOSIS**

With the general confusion around the whole area of self-hypnosis and the lack of clear research foundations to guide its use, it comes as no surprise that clinical use of self-hypnosis is varied and widely idiosyncratic in its application. Generally, self-hypnosis has been used to reinforce therapeutic work, following previous hetero-hypnosis interventions by the therapist (Gardener, 1981, Sacerdote, 1981). It is common practice for practitioners to teach patients self-

hypnosis in order to enhance and extend therapeutic treatment (Sheehan & McConkey, 1979). Usually this component comes after previous hetero-hypnosis intervention by the therapist. The popular notion is that successful response to hetero-hypnosis indicates similar benefits would be gained by self-hypnosis.

Order effects (Johnson et al., 1983) and facilitation findings (Ruch, 1975) suggest that hypnotic responsiveness to repeated hypnotic experiences may be optimised by training procedures which begin with some form of self-hypnosis. If nothing else, initial self-hypnosis may encourage faster responsibility for healing on the part of the client if the focus is on active self-hypnosis involvement from the beginning of clinical treatment. Johnson (1979) theorised that it was the triggering of "active involvement" which inspired greater responsiveness in later hypnotic experience. Similarly, Ruch (1975) noted that it was very important to help overcome subjects' fears and negative expectations, and in fact "sanction" self-hypnosis as an achievable and positive experience. He goes on to note that "any procedure which similarly defines the situation as self-hypnosis and sanctions it might be equally effective in preparing for later self-hypnosis regardless of the amount or phrasing of induction" (p. 298).

To optimise the use of self-hypnosis, it is important to understand the effects of utilising self-hypnosis over substantial periods of time as well as any problems or contraindications. The ideal maximum time for self-hypnosis practice has not yet been researched. While 15 to 20 minutes is common practice, Erickson often recommended lengthier periods of over half an hour (Erickson et al., 1976). Soskis, Orne, Orne, and Dinges (1988) have highlighted the need for further focus on the area of maintenance of practice of self-hypnosis, with people reporting significant problems in scheduling even brief, uninterrupted practice times. Their study found that over one-third of subjects experienced discomfort with the self-hypnosis technique and suggested extra care be taken in defining the exercises and exploring any source of discomfort.

Similarly, we do not know if self-hypnosis practised at home is as effective as self-hypnosis practised in a clinical setting. Hammond et al. (1988) found that subjects new to hypnosis preferred the use of audiotape-assisted self-hypnosis over self-directed self-hypnosis, feeling that they were able to experience a more substantial state shift by using the tape. Patients commonly report that they experience home self-hypnosis as less profound or powerful than their previous clinic experience directed by the clinician. Use of a tape



to assist clients in initial practice could help to reduce the contrast between the two experiences. Hammond et al. (1988) have suggested that use of the audio-tapes can be compared to the use of training wheels when learning to ride: useful to get started, but unnecessary when experienced. With time and experience, subjects who practise self-hypnosis may develop a preference for self-directed practice. To date, no-one has studied the effectiveness of self-hypnosis using audiotapes recorded in an individual's own voice.

## CONCLUSION

Pioneering work in the area of self-hypnosis has begun the long process of empirically exploring this fascinating phenomenon. With its internal focus, self-hypnosis has been less amenable to traditional research designs involving external, behavioural measures. However difficult the research, this is not sufficient excuse to continue evading the question.

Despite decades of research comparing and contrasting self-hypnosis and hetero-hypnosis, findings are still inconclusive. The basic question of whether self-hypnosis is fundamentally different from hetero-hypnosis still does not have a definitive answer. Unless we refocus the research, clinical use of self-hypnosis will continue to be idiosyncratic.

Increasing utilisation of self-hypnosis in many health fields, including enhancement of immune-system functioning, indicates that self-hypnosis is continuing to gain status in the field of hypnosis. It is unlikely that the question will go away. Whatever it really is, self-hypnosis is certainly more than "much ado about nothing."

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## HYPNOTIC ANALGESIA OF SPINAL CORD INJURY PAIN

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*Chronic pain is a common but under-treated problem in patients with spinal cord injury (SCI). The current study sought to examine the efficacy of hypnotic analgesia for SCI-related pain. Four patients with SCI were given 4 to 19 hypnotic treatments with recommendations for daily practice. They provided ratings of average pain intensity and sleep disturbance pre-treatment, post-treatment, and at two-month and one-year follow-up. They also kept daily records of pain intensity and sleep disturbance during baseline, during treatment, and for 5–44 days after treatment. Each patient reported a pre- to post-treatment decrease in pain intensity and sleep disturbance. Three of the patients maintained or improved upon gains made during treatment during the two months following treatment, while one patient's pain intensity and sleep disturbance returned to pre-treatment levels by the two-month follow-up assessment. At one-year follow-up, two of the patients reported having maintained their treatment gains. The third patient who had initially benefited noted an increase of his pain and sleep interference from the two-month to the one-year follow-up assessment. However, even for this patient, at one-year follow-up pain intensity and sleep disturbance ratings were still below pre-treatment levels. The findings support the potential of hypnotic analgesia for assisting some patients with SCI-related pain, and suggest the possibility that patient practice with self-hypnosis may enhance, at least to some extent, the effects of hypnotic analgesia.*

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This research was supported by a grant from the Paralyzed Veterans of America Spinal Cord Injury Education and Training Foundation (ETF) to MPJ and JB.

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Severe chronic pain is a significant concern for about one-third of patients with spinal cord injury (SCI; Bonica, 1991). Chronic pain in patients with SCI can contribute to disability over and above any effects of the SCI itself (Loubser & Donovan, 1996) and research shows that chronic SCI pain is associated with interference in daily activities and a poorer quality of life (Cairns, Adkins, & Scott, 1996; Lundqvist, Siosteen, Blomstrand, Lind, & Sullivan, 1991; Nepomuceno et al., 1979).

Despite its high prevalence, no effective treatments for SCI-related chronic pain have been found (Beric, 1997; Nepomuceno et al., 1979). A search of the literature found only three controlled trials of treatments for SCI-related pain; each involved the testing of a medication. In these studies, trazadone (Davidoff, Guarracini, Roth, Sliwa, & Yarkony, 1987), mexiletine (Chiou et al., 1996), and valproate (Drewes, Andreasen, & Poulsen, 1994) all failed to show a significant analgesic effect over and above the effects of a placebo treatment. Opioids and other effective analgesic medications also have significant side effects, such as constipation and reduction of cognitive function, which are intolerable to many patients.

Research evidence from multiple sources supports the conclusion that hypnotic analgesia can significantly alter a patient's pain experience (see reviews by Barber, 1996; Chaves & Dworkin, 1997; Hilgard & Hilgard, 1994; Patterson, Adcock, & Bombardier, 1997). Controlled research consistently supports the effectiveness of hypnotic suggestions, over and above the effects of expectancy for reducing pain associated with a variety of experimental pain stimuli, such as cold-pressor tasks (Dahlgren, Kurtz, Strube, & Malone, 1995; Houle, McGrath, Moran, & Garrett, 1988), electrical stimulation (Houle et al., 1988; Malone, Kurtz, & Strube, 1989), and intense heat (Price & Barber, 1987; Rainville et al., 1999). Hypnotic analgesia has also been shown to be more effective than other proven analgesics (including morphine) in the reduction of cold-pressor and ischaemia pain (Stern, Brown, Ulett, & Sletten, 1977). Recently, Rainville and his colleagues have demonstrated specific brain activity associated with hypnotic experience, as well as specific cortical sites whose activity correlates with response to hypnotic suggestions for analgesia (Rainville et al., 1999). Moreover, recent controlled trials of hypnotic analgesia support the effectiveness of this intervention for clinical pain problems over and above non-specific factors such as time and expectancy (Haanen et al., 1991; Melis, Rooimans, Spierings, & Hoogduin, 1991; Patterson, Everett, Burns, & Marvin, 1992). However, the effectiveness of hypnotic analgesia for SCI-related pain has not yet been examined.

The strong need for effective treatments for SCI-related pain, and the proven effectiveness of hypnotic analgesia for other pain problems, led us to perform a preliminary study of the short-term effects of hypnotic analgesia on 22 patients with SCI-related pain (Jensen, Barber, Williams-Avery, Flores, & Brown, 1999). The majority (86%) of patients in that study reported an immediate decrease in pain intensity following a hypnotic induction and suggestions for analgesia. A substantial subset of the patients (36%) reported that their pain intensity following a simple suggestion of hypnotic analgesia was lower than it had been in the past six months (Jensen et al., 1999). Jensen et al. concluded that additional examinations of the effects of hypnotic analgesia on SCI-related pain were warranted. To address this need, we provided multiple hypnotic analgesia treatments to four patients with SCI-related pain, and assessed the changes in both pain and its interference with sleep over the course of treatment through one year after treatment.

## **METHOD**

### **Patients**

Four patients with SCI who reported experiencing bothersome SCI-related pain were recruited from a sample of patients with spinal cord injury who had participated in a previous study of the immediate effects of hypnosis on SCI-related pain (Jensen et al., 1999) and who expressed an interest in a trial of hypnotic analgesia for their pain problem. Criteria for selection included: (a) reporting chronic, bothersome, SCI-related pain; and (b) reporting an interest in hypnotic analgesia as a means of coping with this pain.

### **Patient 1**

The first patient was a 65-year-old married Asian woman whose injury occurred 43 years prior to her participation in this study. Her injury, the result of a motor vehicle accident, was incomplete at the C-5 level. Pre-treatment, she complained of moderately strong right foot pain that began about a year following her injury and has persisted ever since. She reported that she usually wakes up in the morning with little or no foot pain and that her pain usually begins in the afternoon and builds to an average of 6.5 (out of 10) by evening. She had tried multiple treatments for this pain, including medications (tricyclics and opioids) as well as an implanted electrical stimulator, none of which provided any relief. Although she said that she does not allow the pain

to interfere with most daily activities, she complained that it interferes with her ability to go to sleep (pre-treatment, her average pain-related sleep interference was 5 on a 0–10 scale, with 0 = *no interference* and 10 = *unable to sleep*). She reported that the pattern and severity of her pain had not changed during the six months prior to her participation in this study. She also reported no previous experience with hypnosis. Her hypnotic responsiveness score on the Stanford Hypnotic Susceptibility Scale (SHCS; Hilgard & Hilgard, 1994) was 3 (out of a possible 5), placing her at the 40th percentile of hypnotic responsiveness (Hilgard & Hilgard, 1994).

## Patient 2

Patient 2 was a 28-year-old Caucasian single man who was living with his parents. His SCI occurred 10 years prior to participation in this study, and was the result of a motor vehicle accident. He had a complete C-5 injury and he complained of “stinging” pain in his legs and hands that had slowly worsened since his original injury, although he reported little systematic change in pain intensity in the six months prior to participation in the study. He recalled having tried medications, but was unable to recall the name of these medications; in any case, none were of any benefit. He also had no previous experience with hypnosis. His hypnotic responsiveness score was 5/5 on the SHCS, placing him at the 88th percentile of hypnotic responsiveness (Hilgard & Hilgard, 1994).

## Patient 3

Patient 3 was a 37-year-old Caucasian single man who lived alone (but had 24-hour attendant care). He had been injured by a gunshot to his neck at the C-4/5 level (complete injury) 14 years prior to participation in the study. He began to experience low back pain (below the level of his complete injury) about one year after his injury, which grew in intensity to an average of 5 (on a 0–10 scale) daily. The severity of his pain had not changed during the six months prior to participation in the study. He reported that immediately after his injury he had undergone hypnotic treatment for neck pain (not the low back pain he currently experiences) but that this was only minimally helpful. At the beginning of the present hypnotic treatment he was taking nortriptyline daily for pain management but he reported no relief. Otherwise, he has not tried other pain treatments. He scored 5/5 on the SHCS, placing him at the 88th percentile on this scale (Hilgard & Hilgard, 1994).

## **Patient 4**

Patient 4 was a 42-year-old Caucasian woman with a 17-year history of SCI. Her original injury was caused by a 40-foot fall from a tree house, and was at the T12/L1 level (incomplete). Within several weeks following her injury she began to feel uncomfortable “electrical” sensations in her legs that began to occur more frequently, until she experienced these sensations constantly. In addition to these constant and uncomfortable electrical sensations, she began to experience “jolts” of severe pain at different times of the day and night. At the time she began this study, these jolts were occurring daily, and the constant electrical pain was rated an average of 4.5 (on a 0–10 scale). She was taking two to four tablets of ibuprofen daily, although she reported that it was not helpful and she only took it because it was the only treatment available to her. She had tried amitriptyline and, a “pain cocktail” that included tegretol and methadone, and gabapentin, none of which provided any relief. She reported no systematic change in her pain during the past six months. She scored 4/5 on the SHCS, placing her at the 63rd percentile in hypnotic responsiveness (Hilgard & Hilgard, 1994).

## **MEASURES**

### **Hypnotic Responsiveness**

The Stanford Hypnotic Clinical Scale (SHCS; Hilgard & Hilgard, 1994) was used to assess hypnotic responsiveness. Although a minimal level of hypnotic responsiveness was not a requirement for participation in this study, each of the patients scored in the medium or high range on this scale.

### **Pain Intensity**

Average pain intensity was assessed using a 0–10 scale, with 0 = *no pain* and 10 = *pain as intense as I can imagine*.

### **Sleep Interference**

Patients were asked to rate the extent to which pain interfered with their sleep on a 0–10 scale, with 0 = *no interference* and 10 = *unable to sleep*.



## PROCEDURE

At the time of initial recruitment, the patients were asked to rate their average pain and the extent to which pain interfered with sleep during the past week. They were also asked to use daily diaries to rate average pain and sleep interference (rated in the evening for pain and sleep interference during the past 24 hours and the previous night's sleep, respectively). Patients were requested to maintain these diaries pre-treatment (i.e., during baseline), during treatment, and for as long after the last treatment as they were willing to do so. The SHCS was administered, and basic demographic and SCI/pain history information was also obtained at the initial assessment.

All patients agreed to participate in at least four treatments. Patients were told that the total number of treatments would depend on their continued interest as well as on a mutual agreement that the treatment continued to be beneficial. Patients were asked to practise self-hypnosis (assisted by an audiotape made during the first treatment) on a daily basis throughout treatment, and for as long after treatment as they wished.

The first treatment was scheduled from 5 to 23 days after recruitment, and always began with the same hypnotic induction as that used for the SHCS (Hilgard & Hilgard, 1994); that is, suggestions were given for feelings of physical, and then mental relaxation, followed by a suggestion that the patient will go more deeply into a "deeply relaxed hypnotic state" as the clinician counted from 1 to 20. However, in order to maximise responsiveness, after each treatment the patients were asked what they experienced during the induction, and any sensations experienced (e.g., feelings of floating, feelings of numbness, visual images or colours) during the induction were suggested during subsequent inductions.

Following the induction, the patients were provided with a series of specific suggestions for analgesia, comfort, and improved sleep. Additional suggestions for decreased awareness of pain and increased comfort were derived from previously published hypnotic analgesia suggestions (e.g., Barber, 1996; Crasilneck, 1995). Patients were asked for feedback during the treatments (i.e., while hypnotised) regarding their responses to the analgesia suggestions. In addition, at the end of each treatment (after the patients were asked to become "awake and alert") the patients were invited to comment on specific suggestions and to identify those that were of greatest interest. Those suggestions were included in subsequent treatments. In this way, both the inductions and the therapeutic suggestions were continually tailored to each patient's interest.

Prior to termination of each treatment, all patients were told they would be able to recreate the hypnotic experience in response to a specific cue (taking a deep breath and holding it for a moment) and, with time and practice, they would find it easier to recreate the experience. Post-hypnotic suggestions were also given to promote increased periods of comfort and to improve sleep quality. At the end of the first treatment, a 20-minute practice tape was made (in the patient's presence) that included the tailored induction and analgesia suggestions selected by the patient and the clinician. The patients were asked to listen to the tape at home while alone at least once per day, but more often if they wished. New tapes were made whenever the patient requested it.

Examples of suggestions made during the first treatment, and used in subsequent treatments if the patient responded to the suggestion and/or wished to hear again in future treatments, included the following:

*Direct suggestions for decreased pain* ("You notice that as you relax, as you feel more comfortable, you feel less and less pain, almost as if the pain were going away, or getting smaller.")

*Direct suggestions for increased comfort* ("You can feel more and more comfortable ... It is so nice to feel ... to really be aware ... of how comfortable you can be.")

*Replacement of pain with other sensations* ("You can notice how any feelings of pain or discomfort can change ... to other feelings ... feelings that are not unpleasant ... that are more comfortable ... like warmth or a very pleasant tingling sensation ... tell me what you feel ... good ... more and more warmth, replacing any feelings of discomfort," and also "You know that you experience many more sensations than your brain has the capability to process. You can use this ability, this skill, to feel more comfortable ... allowing yourself to be aware of the sensations that are always there, sensations that can fill your awareness and replace any feelings of pain ... so the pain simply decreases ... decreases ... and disappears.")

*Ability to ignore pain* ("As your pain continues to decrease, as you build this barrier between pain and your experience, it is almost like it is muffled ... you notice it less and less. It is becoming so easy just to ignore it, you don't even notice it ... you are too busy focusing on activities and thoughts and feelings that are pleasurable ... more time spent enjoying life's experience and less time being distracted ... bothering you less and less.")

*Displacement* (“The pain and discomfort that you usually experience in your [state location of bothersome pain] can now be directed and moved to a different part of your body. Notice how the sensations begin to move, subtly at first, then more obviously. I don’t know if they will move in a circle, or what ... probably not in a straight line ... but just notice how easily they begin to move, out of your [location of bothersome pain] toward your right hand. Maybe you’ve already begun to notice that the [location of pain] pain can be moved to a less intense and troubling area in your right hand [continue suggesting movement until pain has moved to the right hand or until perceived movement stops]. Good, much, or perhaps all of the pain has left your [original location of pain], and has moved to your right hand. Now that you’ve discovered your ability to move these sensations, you can discover that you can also reduce their intensity. Maybe even before I suggested this, you’ve begun to notice that the sensations in your right hand are becoming less and less obvious, less and less intense, and more comfortable ...”)

*Hypnoanaesthesia* (“It is now time to anaesthetise the site of your pain. Notice how naturally, how easily, the area of pain and discomfort is being engulfed in a psychological anaesthesia. The anaesthesia can make your [cite of bothersome pain] feel all funny and tingly. Notice how easily you can feel those tingly sensations just wash over everything. Notice how the tingly, numb sensations absorb and block out discomfort. Such a pleasure to be able to imagine, to really imagine, such a satisfying tingling ...”)

*Decreased unpleasantness* (“You may already be aware that the pain intensity, and the distress that pain can produce are two different things. It is possible to be aware of some sensation, but not be bothered by it. Sometimes, it is even possible to experience significant pain ... and still it does not bother you. As you focus on this idea, you can experience yourself as being less and less bothered by any sensations you experience. Any suffering, any distress, can drift away, to be replaced by feelings of relaxation, comfort, and a sense of ease ... It is possible to feel calm, relaxed, comfortable ... This sense of comfort can grow, so that you are aware of how good you can feel right now ... and in the future ... despite any other sensations ...”)

Examples of the post-hypnotic suggestions follow:

*Post-hypnotic suggestions for self-hypnosis* (“At any time that you want to feel the way you feel now ... relaxed, more comfortable ... all you need to do is to take a nice deep refreshing breath and hold it ... hold it for moment

... and then let it go ... and these feelings, of comfort, of relaxation, and of your ability to alter your sensations so you can feel better, will come washing over you ... like warm water in a bath ... and you can find yourself sinking more and more easily into this state ... and the more you practise, the easier it will be for you, when it is appropriate and only when it is appropriate, to sink into this state.”)

*Post-hypnotic suggestions for increased pain-free periods* (“... and the ... [reduced pain/pain-free] periods, those periods much like you are experiencing now, can continue to expand outside of the treatments ... on their own. Freeing you up to concentrate on what you really want to be aware of ... your comfort, your energy, your awareness of the beauty around you.”)

*Post-hypnotic suggestions for improved sleep recorded on the practice audiotape* (“If you are just beginning the day, you can really enjoy how alert and well you continue to feel. But, in a few minutes, if it is time for you to go to sleep, you might feel surprised at how easily you fall into a wonderfully refreshing, deep sleep. In fact, as you continue to practise, you will find that it becomes easier and easier to fall asleep when you are ready to sleep, and you will experience a deep, restful sleep that leaves you feeling refreshed ...”)

*Post-hypnotic suggestions for improved sleep provided during treatments* (“As you continue to practise and gain skill with self-hypnosis, whenever it is time for you to sleep, you may feel surprised at how easily you are able to fall into a wonderfully refreshing, deep sleep. The more you practise, the easier it will become to fall asleep ... when you are ready to sleep, and you will experience a deep, restful sleep that leaves you feeling refreshed.”)

Patients continued completing diaries during treatment until they chose to discontinue treatment. At the last treatment, patients were again asked to rate their average pain intensity and sleep interference (during the past week) and were provided daily diary measures of pain intensity and sleep disturbance to complete and return. All patients were contacted by phone two months and one year after their last treatment to obtain follow-up assessments of their average pain and sleep interference.

## RESULTS

### Patient 1

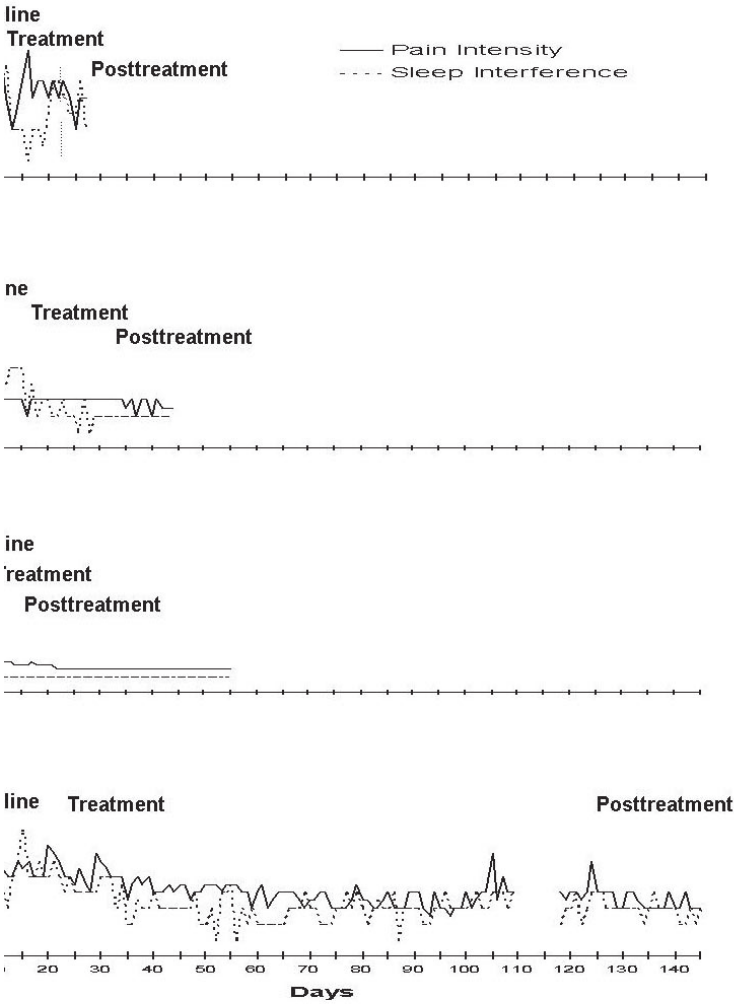
Figure 1 presents the average daily baseline, treatment, and post-treatment pain intensity and sleep interference ratings for all of the study patients. Table 1 presents the pre-treatment, post-treatment, and follow-up ratings of average pain and sleep interference (for the past week). As can be seen in Figure 1, there was a significant variability in the diary ratings of pain intensity and sleep interference for patient 1, although a trend towards a gradual decrease in both measures can be seen. The average of the five baseline pain intensity and sleep interference ratings provided by patient 1 on the diaries were 5.8 and 6.2, respectively. These measures dropped to an average of 5.0 and 4.0 during treatment, and further to 3.8 and 3.4 during the five days after her final treatment. In addition, an examination of her diary ratings relative to when she received treatment showed that she reported less pain on the days she had a hypnosis treatment compared to the day prior to the hypnosis treatment (i.e., the pain intensity ratings on the day of her four hypnosis treatments were 4, 4, 2, and 4; these ratings were 6, 6, 4, and 5 on the day just before each of these treatments, respectively). Interestingly, her very lowest pain occurred following two days of hypnosis treatments in a row. Patient 1's ratings of average pain and sleep interference during the past week obtained at pre- and post-treatment reflect her diary ratings, both showing a drop from 7.0 to 3.0 at these assessment points.

Patient 1 also reported changes in her perceptions of discomfort during each of the four treatments. Although she began each of the treatments with no pain (her pain was usually 0 upon awakening and only began to build during the afternoon and evening), she did experience frequent uncomfortable

**Table 1:** Pre-Treatment and Two-Month Follow-Up Average Pain Intensity and Sleep Interference Ratings, and Stanford Hypnotic Susceptibility Scale Score for the Four Study Patients

Patient	Average pain intensity				Average sleep interference				SHCS
	Pre-treatment	Post-treatment	2 month follow-up	1 year follow-up	Pre-treatment	Post-treatment	2 month follow-up	1 year follow-up	
1	7.0	3.0	7.0	7.0	7.0	3.0	7.0	7.0	3
2	2.0	1.5	1.0	1.0	3.0	1.0	0.0	0.0	5
3	5.0	0.8	0.5	4.0	6.0	0.0	0.0	2.5	5
4	4.5	2.5	2.0	2.5	4.0	2.0	1.5	2.0	4

**Figure 1:** Pain Intensity and Sleep Interference Ratings During Baseline, Treatment, and Post-Treatment



tingling sensations that “went away” during hypnosis, and reported that warm sensations replaced the uncomfortable tingling sensations.

However, although patient 1 said that she practised self-hypnosis several

times during treatment, she did not practise daily. Moreover, she reported that there was not a time or place in her house where she felt comfortable practising with the tape, so she did not use the tape at all. At the beginning of the fifth treatment, she reported that she did not feel she was obtaining enough benefit to continue with treatment. This was surprising since she had documented steady improvement on the pain diaries, and especially so because of her marked response to intensive (two days in a row) treatment. Although she agreed to continue to complete daily diaries to assess any changes in pain and sleep interference following treatment, she did not do so. Thus, we only can present post-treatment diary data for the five days subsequent to the final (fourth) treatment and the post-treatment. At the two-month and one-year follow-up assessments, she reported that pain intensity and sleep interference had both returned to pre-treatment levels; 7 and 7, respectively (see Table 1).

## **Patient 2**

Forty-five daily diary entries were available from patient 2: 15 baseline, 16 treatment, and 14 post-treatment. Figure 1 and Table 1 reveal a larger decrease in sleep interference than pain intensity. The average pain intensity and sleep interference diary ratings decreased from 2.1 and 3.6 during baseline, to 1.9 and 1.4 during treatment, and finally to 1.7 and 1.0 for the post-treatment diary ratings that were available. Pre- to post-treatment average pain intensity and sleep interference ratings decreased from 2.0 and 1.5 (pain intensity) and 3.0 and 1.0 (sleep interference), respectively (see Table 1). Patient 2 underwent nine treatments, after which it was mutually agreed to discontinue treatment because it appeared that his improvement had plateaued. He reported listening to the practice tape at least once, and sometime twice, every day. At the final treatment, he also reported an intent to continue to listen to the tape daily. The tape and the treatments, he said, made him feel very relaxed and comfortable (like a “good feeling flowing over your body”). He also reported a decrease in the extent to which his pain bothered him. At his two-month follow-up assessment, he reported that he continued to listen to the practice tape daily and he also reported still further decreases in pain intensity and sleep interference. At the one-year follow-up, he reported that his pain and sleep interference had maintained at their two-month follow-up levels. However, he was no longer practising with the tape.

### **Patient 3**

Patient 3 showed a very rapid and strong response to treatment (see Figure 1 and Table 1). He provided 5 days of baseline diaries, 6 days of treatment diaries, and 44 days of post-treatment diaries. Average pre-treatment pain from the diaries was 5.4. During the six days of treatment (the first three treatments occurred three days in a row) his average (24-hour) pain intensity ratings were 4, 3, 3, 1, 1, 1. Sleep interference ratings dropped rapidly (during baseline) and were essentially 0 (0, 0, 0, 1, 0, 0) during treatment. Average pain intensity from the post-treatment diaries was .6, and he rated his average (24-hour) pain intensity as .5 for the last 34 days of the post-treatment diaries. Sleep interference was as 0 on each of the 44 post-treatment diaries.

Patient 3 responded markedly to suggestions for analgesia during the treatments. In addition, the duration of comfort obtained during treatment increased from a few hours after the first treatment to all day after treatment number three. He acknowledged he had made excellent progress after the third treatment and he stated at the fourth treatment that he did not expect, nor did he feel the need for, further improvement. Therefore, treatment was discontinued with the understanding that treatment could be re-initiated if his pain returned. As can be seen in the diary data presented in Figure 1, his severe back pain continued to decrease over time. He reported using the practice tape at least once every day. He reported that he responded to tape with feelings of profound relaxation and comfort, and believed that the continued use of the tape helped him to maintain his gains. At two-month follow-up, he reported that his average pain (in the past week) maintained at .5 (on the 0–10 scale) and sleep interference maintained at 0. However, at the one-year follow-up, he reported that his average pain and pain-related sleep interference had returned to 4.0 and 2.0, respectively, although these were still below his pre-treatment levels. He stated that his pain began to gradually increase four months after treatment, following a move in which he lost his practice tape and stopped practising self-hypnosis. He expressed a strong interest to return to have a second practice tape made.

### **Patient 4**

Patient 4 participated in treatment longer than any of the others. She provided 22 days of baseline diary data, 92 days of treatment diary data (eight diary days from the 101 days of treatment were missing because she did not complete them while on vacation), and 20 days of post-treatment diary data. Average



pre-treatment pain and sleep interference from the diaries were 4.6 and 3.5, respectively and her global ratings of pain intensity and sleep interference were 4.5 and 4.0. Pain intensity and sleep interference ratings from the diaries dropped to 3.0 and 2.1 during treatment, and generally maintained (2.6 and 2.0) during post-treatment. Post-treatment assessment of global pain intensity and sleep interference (during the past week) were 2.5 and 2.0, respectively. At two-month follow-up she reported that her average pain and sleep interference during the past week dropped slightly to 2.0 and 1.5. At one-year follow-up, her average pain intensity and sleep disturbance had increased slightly to their post-treatment levels (2.5 and 2.0), about half of their pre-treatment levels.

In general, over the course of treatment, patient 4 showed a steady decline in both average pain intensity and in the extent to which her pain interfered with sleep. She used the tape infrequently at first. Beginning on day 13 of treatment, however, she began listening to the tape nearly every day and she simultaneously began evidencing more rapid improvement. Because her improvement appeared to plateau by the time she had her tenth treatment, the possibility of discontinuing treatment was raised. She believed that she could make more progress with additional treatment, so we elected to continue. Consistent with her expectation, and with continued treatment and regular practice with the tape, improvement continued. Average pain intensity and sleep disturbance from her diaries during the 25 days after her first, but before her tenth treatment, were 3.8 and 2.6. These measures during the remaining 75 days of treatment were 2.7 and 1.9. At one-year follow-up, she stated that her "average pain over the past week has been low except for a couple of incidents over a couple of days (which did not last long). Sometimes I do feel a pain but it is more of a sore muscle pain. I have used the tapes off and on. Mostly to just remind myself of 'the drill.' I pretty much know it and am able to just mentally go through the relaxation-hypnosis steps myself successfully." She also stated that, unlike before treatment when she was always aware of her pain, there are now times when she is completely unaware of the pain in her legs.

## **DISCUSSION**

The current findings provide support for the potential of hypnotic analgesia to reduce the pain and improve sleep quality for some patients with SCI. Each of the four study patients reported a decrease in pain and sleep disturbance pre- to post-treatment. The three patients who practised self-hypnosis after

treatment (using a tape made during treatment) maintained or improved upon their treatment gains as reported at two-month follow-up. At one-year follow-up, two of these continued to maintain their treatment gains. The third reported an increase in both average pain intensity and pain-related sleep interference. However, he noted that this gradual increase in pain was associated with a discontinuation of his use of his practice tape after having lost the tape.

The study findings also indicate a high degree of variability in treatment response. For example, patient 1 did not perceive the pain relief she was obtaining (average pre- to post-treatment decrease in intensity from 5.8 to 3.8 on the diary ratings, 7.0 to 3.0 on the global ratings) as worth the effort of continued treatment. Patient 4, on the other hand, noted less decrease in pain from pre-treatment through the first 10 treatments (from 4.6 to 3.8 on the diaries), yet still wanted to continue even when it was suggested that treatment might be discontinued after the tenth treatment. Patient 2 reported a greater decrease in sleep disturbance (from 3.0 at pre-treatment to 1.0 at post-treatment and 0.0 at follow-up) than pain intensity (2.0 pre-treatment, 1.5 post-treatment, 1.0 follow-up), but found the hypnotic experience highly satisfying and he continued to practise self-hypnosis daily through the two-month follow-up. Patient 3 reported an immediate and profound decrease in pain intensity and sleep disturbance following his first treatment and he did not require more than four treatments to reduce pain intensity to minimal levels, which maintained through two months of follow-up, but did not maintain through the next few months. The idiosyncratic responses are consistent with other reports of idiosyncratic responses to hypnotic suggestions (Sheehan & McConkey, 1982).

Although the small number of patients does not allow a reliable assessment of the association between general hypnotic responsiveness and treatment outcome, the results are consistent with the view that hypnotic ability (as assessed by the SHCS) is not the only factor associated with treatment outcome. One patient (patient 3) who scored in the high range of the SHCS showed a large and rapid analgesic response to treatment. However, a second patient (patient 2) who obtained the same high score did not respond as rapidly or as fully. Even the patient with the lowest SHCS score (relative to the other patients) reported a pre-treatment to post-treatment decrease in both pain intensity and sleep disturbance. However, this patient was not interested in continuing with treatment, and her pain and sleep disturbance scores returned to their pre-treatment levels at follow-up. In short, while it is

possible that hypnotic responsivity was a relevant factor, hypnotic responsivity did not appear as a primary factor in treatment outcome. This result is consistent with our preliminary study, which showed only a moderate association between hypnotic responsiveness and response to hypnotic analgesia suggestions (Jensen et al., 1999), as well as with the growing consensus that hypnotic responsivity may play a limited role in response to hypnotic analgesia for clinical pain problems (see Chaves, 1994; Chaves & Dworkin, 1997; Holroyd, 1996; Patterson et al., 1997).

On the other hand, the findings do raise the interesting hypothesis that daily hypnotic practice (i.e., listening to an audiotape of the patient's hypnotic treatment) may be associated with improved treatment outcome. The three patients who practised regularly after treatment maintained their treatment gains at two months, while the one who did not practise daily reported an increase in pain and sleep disturbance to pre-treatment levels at the two-month follow-up. Moreover, the patient who began treatment practising self-hypnosis only occasionally showed an increase in the rate of her improvement after she began using the tape more regularly. She also reported that when she stopped using the tape for several days in a row (later in treatment), her pain levels began to increase again, which caused her to re-initiate her practice with the tape. This patient did, on the other hand, report at one year that she no longer felt the need to always listen to the tape itself in order to be able to practise her self-hypnosis skills. Patient 4 reported that he had maintained his treatment gains as long as he practised with the tape. However, after the two-month follow-up, and after he lost the tape during a move, his pain and sleep disturbance levels began to increase. These intriguing findings warrant further experimental investigation. If future experimental studies support the importance of regular practice, then this may provide patients with chronic pain better control over their pain, since patients, and not clinicians, ultimately decide how often to practise self-hypnosis. Moreover, the inclusion of practice tapes and regular practice may also increase and maximise the benefits of other hypnotic interventions.

In this study, the hypnotic inductions and analgesia suggestions were tailored for each patient. Thus, although each patient had the opportunity to hear and respond to a variety of induction and analgesia suggestions, only those suggestions that the patient responded to, or that he or she expressed an interest in hearing again, were included in subsequent treatments and in the practice tape. The purpose of this procedure was to maximise each patient's self-efficacy (for responding to the inductions and analgesia suggestions) and

sense of control (over the suggestions used). We anticipated, correctly, that some patients would be more able to experience suggestions of visual experiences, while others could more easily experience suggested physical sensations during the inductions. We also found that some patients could more easily displace their pain, or experience pain as another sensation, while others could more easily ignore the pain or experience the pain as less bothersome. Our hypothesis, untested in the current study because all of the patients received tailored suggestions, is that tailored hypnotic interventions are more effective than standardised ones. Future research can directly test this hypothesis.

There are, of course, important limitations of the current study. Because of the small number of patients, we cannot accurately gauge the generalisability of the findings to other patients with bothersome SCI-related pain. It is possible that the four study patients over-represent one particular sample of patients with SCI-related pain (e.g., those most responsive to hypnotic analgesia). Moreover, although the patients were not specifically selected for their hypnotic responsiveness, no-one with an SHCS scale score of less than 3 participated in this study, so we cannot determine the effects of the intervention on patients with SCI-related pain who score on the low end of hypnotic responsivity.

Despite the study's limitations, the findings provide promising preliminary support for the potential of hypnotic treatment to reduce the pain and sleep disturbance of patients with SCI-related pain. Research employing larger samples of patients who have both high and low hypnotic responsivity scores will further clarify the value of hypnotic treatment for this pain syndrome.

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## **HYPNOSIS AS AN ADJUNCT TO TINNITUS RETRAINING THERAPY IN THE TREATMENT OF PERSISTENT TINNITUS**

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*This case outlines the successful treatment of persistent tinnitus using hypnosis as an adjunct to tinnitus retraining therapy. The hypnotic interventions utilised over the two sessions included: ego-strengthening, symbol of peace, ideomotor signalling, positive suggestions regarding Vicky's hearing mechanism, and self-hypnosis. These interventions resulted in a reduction of the client's tinnitus awareness from 20% to 5% of the time and a reduction in severity rating from 6 to a 3 out of 10.*

Vicky was referred to the audiology clinic by an ear nose and throat surgeon for tinnitus retraining therapy (Jastreboff, 1990) for her persistent tinnitus. The client is a 60-year-old married woman, residing in the Sydney metropolitan area. During the initial assessment she reported she had bilateral tinnitus, which commenced in 1996 and was initially masked by environmental sounds. Since then, the tinnitus had become a constant, buzzing sound “like Christmas Beetles” and, at times, increased significantly in volume. She was aware of her tinnitus 80% of the time and rated its severity 9 out of 10 (where 10 = the worst ever experienced). It was noted that Vicky had not undergone any other treatment for her perceived tinnitus.

Vicky reported experiencing a number of stressful events in recent years, with the death of significant others in her life and her migration from England to Australia with her husband, one year prior to her referral to the clinic. When she first came to Australia she “felt depressed” and described having a “black period,” feeling confused “as if I was losing my mind,” crying a lot and feeling fatigued. She reported she did not seek any treatment for this and said

things had improved in the six months prior to my assessment. Vicky identified these life events as having increased her awareness of her tinnitus.

Vicky underwent tinnitus retraining therapy at the clinic with me for a period of seven months, in which time she experienced significant improvements. After this time she advised being aware of her tinnitus 20% of the time, and rated its severity as 6 out of 10. Although she was happy with these improvements, she reported the tinnitus still bothered her when she did hear it.

The rationale for using hypnosis with Vicky was based on the positive research outcomes of hypnosis in the treatment of patients with persistent tinnitus. Attias, Shemesh, Shoman, Shahar, and Sohmer (Henry, 1992) conducted a controlled study to assess whether self-hypnosis had any effect on tinnitus perception, in a sample of 36 males. There were three groups: (a) self-hypnosis, (b) presentation of brief auditory stimulus to the ear where the tinnitus was located, and (c) waiting-list control. The most significant and interesting outcome was that 73% of the subjects in the self-hypnosis group reported a disappearance of the tinnitus immediately after self-hypnosis. Only the self-hypnosis group showed significant reduction in tinnitus severity immediately after treatment, which remained for two months post-intervention.

The use of hypnosis in the treatment of Vicky's tinnitus perception was discussed with her. She was extremely keen to undergo hypnosis to assist the problem. She had not previously undergone hypnosis. She identified hypnosis with stage hypnosis. This led to the exposure of her concern that I could make her do things she did not want to do, thus she would not be in control of herself. The myths surrounding this fear were explained to Vicky, following which she advised she felt comfortable to enter a hypnotic trance.

### **Suitability of Hypnosis for Client**

Vicky had not previously experienced hypnosis. She did not have a history of psychiatric illness, nor did she present with any symptoms, such as depression, psychosis, or ingestion of medication that would contraindicate for hypnosis.

The Stanford Hypnotic Clinical Scale (Morgan & Hilgard, 1975) was conducted to measure her hypnotic susceptibility. Scoring on the scale indicated Vicky was highly hypnotisable (score = 4). Thus, it was identified she was a suitable candidate for hypnotic intervention.



## **Treatment Goals**

Through a collaborative approach we identified that Vicky wanted to achieve the following through the use of hypnosis:

1. To reduce her perception of the tinnitus;
2. To reduce the severity of the tinnitus when she was aware of it;
3. To increase her ability to relax and feel peaceful, so that she could reduce her stress and thus reduce her tinnitus; and
4. To feel confident and better about herself.

## **Session 1**

The induction I decided to use was eye fixation and focus on breathing (Walker, 1998). Vicky's eye movements and watering of her eyes (as they became fatigued), were utilised in the script to induce a trance state. I observed her eyes become more and more fatigued and also utilised her breathing pattern to induce a relaxed state. It was evident as I took Vicky through this induction that her breathing rate reduced significantly. Once relaxation was achieved, I counted from 1 to 20 to allow Vicky to enter into a trance state. Deepening was achieved by counting from 21 to 50 at a slow, regulated, and monotone pace. As there was considerable noise external to the therapy room, I made the suggestion that the noise would fade into the background and that Vicky would concentrate on my voice.

The ego-strengthening suggestions I used were those of Barbara Newton (provided during ASH N.S.W. Branch Advanced Module — 1998). The suggestions were modified to Vicky's needs. As discussed with her when treatment goals were identified, these included: (a) feeling stronger both emotionally and physically, (b) feeling "healthier, more alert and energetic", (c) "feeling calm and relaxed about life", (d) "dealing with all aspects of life with strength and confidence", and (e) ability to focus on the task at hand.

I then introduced symbol of peace suggestions, asking Vicky to think of something that symbolised peace to her. I asked her to indicate to me through the use of ideomotor signalling when she had thought of her symbol of peace. Once she responded, I gave the post-hypnotic suggestion that the symbol made her feel calm and at peace, and at times when she felt the need to feel calm, in control and at peace, she could think of her symbol and slow her breathing down and think "peace." I reinforced this by suggesting Vicky could think of her symbol of peace when her tinnitus was bad, to assist her to feel calm, in control, and relaxed.

The suggestion was then made that her hearing mechanism would become more selective to pleasant sounds that enriched her life. The pleasant sounds previously identified by Vicky when goal-setting were utilised. These included: classical ballet and operatic music, the sounds of nature (birds, water flowing, wind through the trees, dogs barking), people chatting and laughing. In relation to the sounds experienced when in a natural setting, Vicky's attention was drawn to the nature sounds heard in the room (*Crystal Clear* tape playing by Ken Davis). This process was repeated to enhance its effect.

De-hypnotising was achieved by suggesting Vicky would return to the waking state and that she would not experience any ill effects, but would feel fresh and relaxed. I then proceeded to count from 10 to 1. On the count of one, Vicky awoke from the hypnotic trance.

Debriefing on conclusion of the hypnotic intervention resulted in positive feedback. Vicky advised experiencing the sensation that she could float out of her body, she was not afraid of this, but quite enjoyed the experience. She also had a cold sensation throughout her body during the entire hypnotic session, though again this was not unpleasant as she felt very peaceful and relaxed. During hypnosis she encountered a lovely place, a garden full of trees and lovely bright flowers, with birds "twittering" and a beautiful waterfall. Although she experienced this beautiful scenery, she stated she could hear what I was saying to her. I asked her if she could hear the construction work going on outside the room during the hypnotic session. She advised she did not hear this, that she could hear me and the pleasant sounds of music and nature. Overall, she advised she thoroughly enjoyed the experience, and of most significance she reported she could not hear her tinnitus on awakening from the hypnotic experience. Vicky was given a tape of the day's hypnotic session for her to practise at home.

We agreed that during our next session self-hypnosis would be taught as she was going overseas for a month after our next session.

## Session 2

At the start, we discussed Vicky's experiences since our last session. She reported she had experienced fatigue for approximately one hour after the session, but this eventually passed. She stated she has felt at peace and relaxed since our last session. Vicky was excited to inform me she had a business dinner to prepare for her husband and his colleagues. Usually she would panic with such events, yet this time she was very calm and relaxed and the dinner

was a success. She stated she heard her tinnitus from “time to time,” but her awareness would pass very quickly. I clarified with her the amount of time she was aware of her tinnitus, which was 5% of the time, and the severity had reduced to a rating of 3 out of 10. The hypnosis tape was listened to in the evenings before she went to bed — she found this very relaxing. Vicky was extremely happy with these results and keen to learn self-hypnosis so she could maintain and possibly improve these results.

This hypnotic session commenced with an arm-levitation induction. Vicky was instructed to place her hand on the arm of the chair, with her palm facing upwards towards her face. Suggestions were given that her “fingers would spread slightly,” her arm “was beginning to feel weightless.” I watched the movement of her hand closely and capitalised on the movements she made by making suggestions her hand was rising towards her face. Furthermore, the suggestion was made that once the tips of her fingers touched her forehead between her eyebrows, she would chose to close her eyes. The suggestion that her hand was weightless was repeated a number of times throughout this induction. Vicky’s hand was instructed to begin rotating in a clockwise direction, “like a balloon on a string that is rotating ... weightless feeling ... it is a pleasant experience, a satisfying experience.” Deepening was obtained by suggesting that she would relax with each time she breathed out, and then I counted from 5 to 1 and suggested she go into a deeper trance.

Prior to the commencement of our hypnotic session I had explained the advantages and disadvantages of self-hypnosis. The content of the hypnotic session was to train Vicky in self-hypnosis while she was hypnotised. Thus, it was suggested she rotate her hand and place it on the arm of the chair on the count of 5 to 1. Instructions were then given that, on the count of 5 to 1, Vicky would return to the waking state and put herself back into trance by raising the palm of her hand to her forehead (as she had done initially), but this time at a very rapid pace. She carried out these instructions with ease. Once back in trance it was suggested Vicky could use self-hypnosis discreetly, when she chose to, even when she was in public, as long as it was “safe” to do so. Instructions were given as to how she could do this. It was also suggested that while doing self-hypnosis she could give positive suggestions regarding her hearing mechanism becoming more selective to pleasant sounds. She was provided with ego-strengthening suggestions.

De-hypnotising was achieved by encouraging Vicky to return to the waking state on the count of 8 to 1, and that no ill-effects would be experienced as a result of the hypnotic trance. Positive suggestions were given regarding the use

of self-hypnosis and how she could use this tool without people being aware she was in trance, by camouflaging it. It was suggested she click her fingers as a signal to come out of self-hypnosis. I then counted from 8 to 1 and Vicky returned to the waking state.

She reported that she felt she went into a deeper trance this session. She experienced the feeling of her hand floating, yet the rest of her body was heavy and relaxed. She enjoyed this experience. It was noted that when it was suggested her hand rotate, like a balloon rotating, Vicky's hand was observed to be rotating and she reported that her arm felt as if it was rotating. She was amazed by the fact she came back into the waking state and the ease with which she put herself back into hypnosis. She stated she found the whole experience very powerful and looked forward to practising self-hypnosis regularly for her tinnitus.

It was negotiated that she practise her self-hypnosis every day instead of utilising the tape I had previously prepared. Vicky agreed to telephone me once she returned from overseas in one month's time and let me know how she was going with the self-hypnosis and her tinnitus.

## **OUTCOME**

One month later I received a telephone call from Vicky, who advised she had returned from her holiday, which she had enjoyed. Furthermore, she thoroughly enjoyed using the self-hypnosis regularly and attributed its regular use for the continued reduction in her tinnitus awareness (5% of the time) and severity (3 out of 10). She thought that, with continued use of self-hypnosis, she might experience further reductions with time. Also, even though she was still aware of her tinnitus, she no longer feared it. This would assist further with tinnitus retraining therapy, as one of the main principles of this therapy is not to fear the tinnitus. Vicky was extremely happy with the results of the hypnosis sessions. She felt so confident with her achievements that she did not feel she needed to return for further therapy.

## **DISCUSSION**

I felt very confident using hypnosis with Vicky and was sure she would benefit from the experience. While she was undergoing tinnitus retraining therapy she had been very open to experiment with different skills, to test if they would reduce her tinnitus. She gave feedback to me regarding her training and was very compliant. Vicky was dedicated to learning how to habituate to her

tinnitus. These three significant factors allowed her to obtain optimal benefits from tinnitus retraining therapy and hypnosis.

It was very rewarding for her to experience a significant reduction in her awareness and the severity of the tinnitus after the first session. I must admit I was concerned about this significant reduction after the first session, as I felt if she did not maintain these results she might have felt the hypnosis had failed her. After being taught self-hypnosis, practising these skills while she was overseas for one month resulted in her maintaining these positive results, which were an outstanding achievement. It was extremely positive that Vicky reported she no longer feared her tinnitus, as the main principle of tinnitus retraining therapy is to maintain a neutral response to the tinnitus. It must be noted that the maintenance of these results may have been a combination of the client becoming adept with self-hypnosis and the fact she was having a holiday. Time will tell whether being overseas was a form of distraction, for if this was the case the outstanding reduction in her tinnitus would not be maintained, even while using the self-hypnosis.

Furthermore, it could be hypothesised, the experience of hypnosis allowed her to believe in its positive outcomes, thus putting her in a positive state of mind, resulting in a neutral response to her tinnitus, and a reduction of her tinnitus awareness and its severity. In any case, there is not an extensive amount of research into tinnitus and the phenomena of hypnosis. It would be very interesting for further research to be carried out in this area of interest.

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## USE OF HYPNOSIS IN PAIN MANAGEMENT AND POST-TRAUMATIC STRESS DISORDER

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*This case study describes the management program used with a 34-year-old woman who had been involved in an industrial accident and was suffering post-traumatic stress disorder and pain. The hypnotic interventions included pain management techniques, guided imagery, and self-hypnosis.*

Pat was referred by an occupational health and safety officer following a work-related accident. The fact that she was referred by a third person may have had some implications for the therapeutic process. Some clinicians argue that there is a decreased motivation in those individuals who are not self-referred. Indeed this tended to be confirmed in this case as there seemed to be some conflict between the referral source's goals and those of the client. The referral source's primary reason for referral was to ensure that Pat made a successful and rapid return to work. Her primary goal, on the other hand, was to reduce her levels of pain. This conflict in anticipated outcomes tended to lead to some resistance on Pat's part.

The presenting problem in this case was associated with a Worker's Compensation claim. Again some studies suggest that motivation for change may be reduced in these situations due to the possible financial losses associated with "becoming better." In addition, the therapy provided was free of charge to the client and some may argue that the impetus for change may be decreased when financial outlay is not involved.

## **DIAGNOSTIC INTERVIEW**

### **Personal Presentation**

Pat was a 34-year-old woman who was married with no children. She presented as a thin woman of short stature. Pat had an unsteady gait, which she explained was due to an injury she had sustained two weeks previously.

Throughout the first session Pat was cooperative but tended to speak in general terms. She often seemed vague and she expressed some confusion about the reason for referral as she felt her physical injury could not be helped by psychological intervention.

### **Psychosocial**

Pat was Australian born and was the youngest of five children. She had a working-class background; her father was a plumber and her mother was a housewife. She had two elder sisters and two elder brothers.

Pat described her childhood as “average.” She was on good terms with most of her siblings and had a good relationship with her parents. She stated that she had infrequent contact with family members as they lived interstate. Pat had been employed in her current position as a process worker for eight years. She had left school at the age of 17 years.

### **Medical**

According to Pat she had experienced very few medical complaints prior to the accident. She had suffered from asthma as a child but had not experienced this as an adult.

The medical diagnosis of the injury was a soft-tissue injury to the back and left hip. She had sustained severe bruising to the lumbar-sacral spine. The prognosis was good and full recovery was anticipated.

The treatment included physiotherapy twice per week and the medication included Feldene (20 mg once a day) and Digesic (two every four to six hours).

### **Presenting Problem**

Pat was referred for psychological assistance by the occupational health and safety officer from her workplace. The referral source stated that Pat had been involved in an industrial accident two weeks before, when she had been hit by a fork-lift and crushed underneath a pallet. Severe injuries were sustained to

her hip and spine. The referral source stated that Pat had attempted to return to work on light duties on two occasions but was experiencing anxiety attacks, particularly when fork-lifts were visible.

The client's account closely followed that of the referral source. Pat explained that since the accident she had been unable to sleep, had relived the accident regularly, and experienced high levels of pain and anxiety. She expressed fears about returning to work due to the possibility of having another accident and to the anticipated increase in pain. Pat also said that she had attempted to return to work on two occasions since the accident, but she had not coped, and had vomited and felt anxious on both occasions. She stated that she had begun to feel ill when she arrived at work but had become more distressed as she entered the production area where she had usually worked.

Pat expressed some doubts about the value of psychological intervention, as she tended to view the problem as a medical issue.

### **Previous Hypnotic Experience**

Pat could not recall any specific hypnotic experience. However, she explained that, in her youth, she had been a state swimming medallist and as a part of her training she was taught "self-control" through relaxation, control of breathing and other meditative methods. It was felt that some of her earlier experiences might be utilised in the current situation.

## **ASSESSMENT OF HYPNOTISABILITY**

The client's suitability for hypnosis was determined by examining the nature of the presenting problem, the existence of contraindicators, and hypnotic capacity.

The nature of the presenting problem was a major determinant in the use of hypnosis in this case. The client's presenting problem concerned (a) anxiety attacks and (b) pain management. Hypnosis has been shown to be an effective intervention in these areas. With respect to the former, research has shown that hypnosis can be paired with cognitive and behavioural strategies successfully to reduce and resolve anxiety disorders (Crasilneck & Hall, 1975; Kroger, 1977).

Hypnosis is also highly regarded as a pain-management intervention and Crasilneck and Hall (1975) comment that: "Management of pain problems remains one of the first and most enduring uses of hypnosis" (p. 78). Several studies have highlighted the value of hypnosis in reducing pain levels (Evans, 1990; Hilgard & Hilgard, 1975).



There appeared to be few contraindications to the use of hypnosis. Pat did not have a psychiatric illness or severe depression. Although she was reserved about the effectiveness of hypnosis, she was not highly resistant to its use and she had demonstrated a rapport and trust with the therapist.

A good hypnotic capacity was demonstrated by the client. The Stanford Hypnotic Clinical Scale was administered and Pat fell within the medium hypnotisable range. Taking all these factors into consideration, hypnotic intervention was seen as appropriate.

## **TREATMENT PLAN**

The two components of the presenting problem were considered separately when developing the treatment plan.

### **Anxiety Disorder**

According to DSM-IV (American Psychiatric Association, 1994), the anxiety disorder experienced by the client may be classified as Post-Traumatic Stress Disorder. It was directly related to the recent work trauma she had experienced and this correlation allowed the intervention to be direct and structured to resolve the anxiety.

The treatment plan to alleviate the anxiety attacks relied on a combination of behavioural and cognitive interventions. Relaxation, guided imagery and in vivo exposure were the primary tools used. These will be described in more detail below.

### **Pain Management**

As mentioned, the recent nature of the injury meant that Pat was likely to be experiencing acute pain involving tissue damage and physiological symptoms, in contrast to chronic pain, which tends to develop later and which can be more psychosomatic in nature.

Research indicates that there are many hypnotic techniques which can be used effectively in pain management interventions. These include direct hypnotic suggestion for total abolition of pain, permissive indirect suggestions, amnesia, hypnotic analgesia, hypnotic replacement of pain, hypnotic displacement of pain, and reinterpretation of the pain experience.

In consideration of the presenting problem, the therapist's professional discipline and the client's goals, two techniques were selected as most appropriate. First, the use of imagery to modify the pain was seen as a suitable

intervention, and second, as the therapist felt there might be some resistance to change at the conscious level, more permissive and indirect suggestions were thought most likely to result in a successful outcome.

It is important to note at this stage that several precautions were taken before the pain-management therapy was commenced. As a psychologist, I was aware of my limitations to make medical assumptions about the injury or to assume that the pain could be modified safely. Therefore it was necessary to consult with the client's treating practitioner and to obtain information regarding the injury, diagnosis, and prognosis. Hence the overall treatment plan was discussed with the doctor and his approval was obtained before therapy was commenced.

## TREATMENT

### Session 1

The initial session involved taking a case history and determining Pat's goals for attending therapy. As the presenting problem involved issues of pain, some time was spent investigating this. Pat was asked to describe the pain in detail, to discuss the effect it had on her life, and to elaborate on the frequency and duration of the pain experience. She was also asked to rate her pain on a scale ranging from *pain-free* (1) to *the worst pain you could imagine* (10).

As previously stated, Pat's goals for attending therapy were somewhat vague. However, she did communicate the following goals: (a) to reduce the level of pain, and (b) to be less anxious about going to work.

Following discussion of the therapeutic goals, the concept of hypnosis was introduced. The client was asked to explain her understanding of hypnosis. Once this had been obtained, the therapist spent some time explaining hypnosis, taking care to correct and overcome some of the commonly held misconceptions which had been identified. In this case, Pat had expressed concern about being "under someone's control." This was discussed at length and Pat was assured of being alert, awake, and in control during hypnosis.

Trance was induced using the Spiegel induction technique. The client was successful in demonstrating the trance phenomenon of arm levitation. The exhibition of arm levitation acted both as a deepening procedure and as a demonstration of the difference between hypnosis and other forms of relaxation and meditation.

Once Pat had achieved trance, ideomotor finger signals were established using the method described by Hammond and Cheek (1988). Pat was then

asked: “Is your unconscious mind willing to cooperate in the management of pain and anxiety?” Using ideomotor finger signals, a “yes” response was obtained. This suggested that Pat was willing, at an unconscious level, to work toward positive change.

Having obtained permission from the unconscious mind, a visual imagery script was utilised. This involved Pat’s visualising a pain-control switch which could be turned up or down as required. She was asked to indicate on a scale of 1 to 10 the level of pain she was currently experiencing. She replied “5.” Pat was then asked to use the pain-control switch to reduce the pain to 4, then to 3. By using ideomotor finger signals, she indicated her ability to carry out this task.

A post-hypnotic suggestion was given so that Pat could use this technique at any time. It may be recalled that Pat had been a successful competitive swimmer, and it was thought that her breathing control would be well developed. With this in mind, the following was suggested:

Whenever you want to control your pain, you only need to take three deep breaths, each time breathing in calmness and breathing out tension and pain. You will find that you are then able to relax and to focus your energy on the pain switch and on reducing your pain levels.

This suggestion was used as a cue for self-hypnosis.

Before trance was terminated, a precautionary statement was given. Pat was told that her unconscious mind would be able to distinguish successfully between pain which was acting as a warning, and thus was necessary, and pain which was not needed. This precaution was to ensure that Pat did not ignore vital pain signals.

An audiotape was made of the first session and Pat was encouraged to listen to this each day for a week.

## **Session 2**

Pat commenced the session by reporting that her pain levels had been stable over the last week. However, she said that her pain had been so severe on one occasion that she had taken additional medication to cope. On that day she reported that she had been unable to relax adequately to listen to the tape.

Pat continued to express some doubts about her ability to use hypnosis to relieve the pain entirely. At this stage I considered that there may have been some resistance to relinquish the pain at the conscious level. However, it will be recalled that, in the first session, Pat’s unconscious mind had agreed to work

on the development of pain-management techniques. Where there is conscious resistance, many practitioners have utilised the more indirect techniques initially developed by Erickson (1980). It is thought that these techniques bypass the conscious mind but are understood by the unconscious mind (Grinder & Bandler, 1981.) In the case at hand, the use of metaphor was seen as a possible intervention as this technique would contain less obvious references to pain control.

To date, the anxiety attacks had not been directly addressed. It was hypothesised that they were indicators of Pat's remaining fear from the accident and also highlighted her fear of returning to work. Hence the goal for the second session was to resolve the anxiety disorder and to utilise indirect techniques to develop pain control.

Trance was induced as in the first session. Relaxation techniques were used to reduce autonomic arousal. Pat was asked to go to a favourite place where she had, in the past, experienced relaxation and calmness. She was asked to indicate, using ideomotor finger signals, when she was at this place. Once a "yes" response was obtained, Pat was asked to maintain the same level of calmness and relaxation while she visualised another situation. She was asked to imagine herself at the entrance of work and to observe the activity there. A detailed description of the workplace and the people and the equipment in it was provided. Varied sensory information, including the smell, the feel of the machinery, etc. was given. The therapist had recently visited the work site so the description was known to be accurate. Pat was asked to see herself walking into the work area with confidence and calmness. The script continued in this manner with the final outcome of Pat's being able to touch a fork-lift.

Throughout the session, Pat was asked to indicate her success in completing the tasks by using ideomotor finger signals. Pat indicated success at each stage. She was praised for her achievements and several positively reinforcing statements were included.

Once Pat had achieved the desired outcome (of visualising herself close to a fork-lift), she was asked to return to her "special place." At this stage the second goal of the session commenced and the metaphorical script was introduced. The script was introduced in the following way:

And now you are relaxed and comfortable, having achieved your desire to be confident and capable at work, I felt you may like to share a story my friend told me the other day about the experience she had when her bike broke down on the way to work. Pat, I know you often ride your bike to work so I knew you would appreciate this story.

The story told of “my friend,” who owned a bicycle which she rode to work each day. She had the bike for many years, and although it was a bit worn she knew it was reliable and it had never given any trouble. I explained how one day recently, on her way to work, without her suspecting anything, the bike was hit by a stone which had been thrown up by a car. The stone had wedged in the wheel and the wheel wouldn’t turn. The story told of her frustration and distress as she was abandoned by the side of the road with a bike which wouldn’t work. I explained how frustrated she had been and how she had felt panic and distress. I then discussed how she had decided to be calm and examine the situation logically to see if there was a way the bike could be mended. I spoke of how my friend considered various solutions to fix the bike — how she had thought of one solution and discarded it, then thought of another, until finally she had found a special and individual way to fix her bike so it would work again. The story then went on to speak of her joy at having fixed the bike and how she had discovered hidden talents. In fact, I said, my friend in the end was rather pleased to have faced the challenge of fixing her bike because not only did she learn how strong, innovative, and capable she was, but she also learnt how much she appreciated and liked her old bike.

The story was told more extensively than indicated here, but the parallels with Pat’s injury and pain management are obvious. The story recognises the unexpected nature of injury, the fear and distress of accidents, the frustration of being “broken,” the uncertainty of recovery, and the sense of achievement after gaining a full recovery.

It may be noted that the metaphor was used at the end of the trance as it was believed that Pat would be less alert for therapeutic messages at this point and this would mean that the information might not meet conscious resistance.

### **Session 3**

At the commencement of the third session, Pat reported several changes. She stated that she had returned to work three days before and had not experienced any anxiety attacks. "I have seen the fork-lifts," she said, "but they don't bother me any more. I'm a bit wary, of course, like I don't go out of my way to be near them, but I'm okay." She also reported significantly reduced pain levels. She was working four hours per day on alternative duties at work and was planning to increase to eight hours per day the following week. She said that she had occasionally experienced back pain but felt this was something she was able to cope with.

It had been intended that the third session would include further pain management assistance as well as the preparation for in vivo exposure to fork-lifts. However, Pat had traversed these stages of her own accord and it was agreed that this would be the final session with the opportunity to refer again if necessary.

The final session reinforced the concepts developed in the first and second sessions. In trance, Pat was asked to review her achievements over the preceding three weeks and to congratulate herself for her strength and resolve. The continued use of the pain switch technique was encouraged when she felt the pain levels increasing. In trance, Pat was encouraged to note the continuing improvements she would experience in the following weeks.

### **Follow-Up**

A follow-up telephone call was made two months after the completion of the final session. Pat reported that she had returned to work full-time and was no longer experiencing any pain as a result of the injury. She had not felt the need to listen to the audiotape for approximately one month. Pat stated that she was not bothered by the fork-lifts at work and had not experienced any further anxiety attacks.

The health and safety officer who had referred Pat was also contacted at this time. She reported that Pat had made a very successful return to work. Indeed she stated that the company doctor had been surprised by the speediness of Pat's recovery.

## DISCUSSION

It may be recalled that there were two therapeutic goals determined by the client: (a) resolution of the anxiety, and (b) development of pain management techniques. The approach used to achieve these goals reflected the needs of the client, but also the skills and background of the therapist.

The techniques which were used to resolve the anxiety attacks reflect the special properties and value of hypnosis. While behavioural and cognitive approaches may have resolved the issue with time, hypnosis provided additional support, as recognised by Kroger (1977): "Hypnosis can help to simulate real-life situations and make therapy easier by relaxing the patient, providing scene visualisation and imagery to help in reducing the associated anxiety and tension" (p. 168).

Hypnotic intervention was used as a powerful adjunct to the more traditional interventions used to resolve anxiety disorders. In the case described, behavioural change was combined with visual imagery in hypnosis to achieve a successful outcome. While behavioural and cognitive approaches alone might have been equally successful, the provision of hypnosis, in my opinion, allowed for a more rapid and less traumatic recovery. Indeed in this case the often lengthy practice of *in vivo* exposure was reduced as the client had practised the situation through visual imagery in hypnosis.

As mentioned, there are a myriad of hypnotic interventions available for use with clients who perceive pain. The two approaches chosen in this case were determined by the nature of the presenting problem, the client's perception of pain, the client's hypnotic ability, and the skills and training of the therapist.

It may be recalled that the client had experienced a recent injury. This suggested that some or all of the pain was necessary for recovery and could act as a gauge, for the client, of becoming better. Hence techniques of total pain removal were not seen as appropriate.

Second, the client's perception of the pain was such that resistance was anticipated if total anaesthesia was attempted. Indeed the client had expressed some doubt about her ability to remove the pain entirely and had expressed concern about becoming pain free.

Third, the client's hypnotic capacity was adequate but as extensive anaesthesia is commonly associated with deep trance states, the results of the Stanford Hypnotic Scale suggested that the client could not successfully achieve this. While research indicates that a lower capacity may not be important where there is extremely high motivation (e.g., in the case of

trauma victims; Crasilneck & Hall, 1975), in this case such motivation for change was not evident.

Finally and possibly most importantly, there was some reluctance on the part of the therapist to utilise pain-control methods such as anaesthesia, analgesia or even displacement of pain. This reluctance reflected my lack of confidence as a psychologist in dealing with medically related issues. Even though medical information had been obtained, it was considered safer to attempt pain reduction rather than removal.

Hence these four criteria largely determined the approaches considered most suitable for the treatment of Pat. The techniques provided the client with relaxation skills which would also serve to reduce anxiety and increase pain management abilities. In addition, the provision of the audiotape ensured regular relaxation times which can be very useful with acute pain (Hilgard & Hilgard, 1975).

The second pain management intervention of indirect and permissive suggestion reflected a belief on the part of the therapist that there was some conscious resistance by the client. Research has shown that some individuals are unwilling to let go of their pain for reasons including punishment of self or others, or secondary gain factors such as sympathy or financial rewards from litigation (Evans, 1990). Therefore it was considered important to attempt to highlight the benefits of becoming better at a level where conscious resistance or rationalisation would not be available. For this reason, indirect suggestions using metaphor were used.

In developing the metaphor, several issues were considered. First, the metaphor had to be meaningful to the client. In taking the case history I had learned that Pat rode a bicycle to work many days, so I felt that a story about a bicycle rider would be meaningful to her. Second, a metaphor should not be easily interpreted at the conscious level (Grinder & Bandler, 1981). It is believed that the metaphor used was not easily identified as a pain management instruction but the parallels were likely to be recognised and accepted by the unconscious mind. Finally, the metaphor must contain the solution to the problem. The metaphor used in this situation highlighted the benefits of becoming better.

In conclusion, the case study described utilised a number of different techniques. Milton Erickson (1980) commented: 'Hypnosis is essentially a communication of ideas and understanding to a patient in such a fashion that he will be most receptive to the presented ideas and thereby motivated to explore his own body potentials for the control of his psychological and



physiological responses and behaviour.' It was with these comments in mind that the therapeutic approaches described in this case study were selected and the success of the intervention suggests that hypnosis was used most effectively to meet the client's needs.

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## THE MEANING OF TRAUMA: HYPNOSIS AND PTSD

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*The onset and course of chronic post-traumatic stress disorder (PTSD) as a reaction to an event must be viewed in light of the personal meaning of the trauma to the individual. This report details the therapeutic process involved for a 27-year-old male who had been the victim of an armed robbery and subsequently developed PTSD. A combination of hypnosis and cognitive behavioural therapy was employed to facilitate integration of the trauma and promote his ability to deal with it. Under hypnosis, the idiosyncratic nature of his reaction became apparent and he was able to abreact the affective component of the event. The case illustrates the importance of understanding the nature of the meaning of the trauma to the client and the efficacy of hypnosis in dealing with it.*

*The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV; American Psychiatric Association, 1994) defines Post-Traumatic Stress Disorder (PTSD) as a collection of symptoms which develop “following exposure to an extreme traumatic stressor involving direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one’s physical integrity” (p. 424).*

For diagnosis, the person must not only experience the event, but must respond with fear, helplessness, or horror. The symptoms include re-experiencing the event, avoidance of stimuli associated with the event, general numbing of responsiveness, and increased arousal. The symptoms must be present for more than one month, and must cause significant distress or impairment in functioning. Events which precede PTSD include personal assault, robbery, naturally or humanly caused disasters, or a life-threatening illness.

Not everyone who experiences a traumatic event will experience PTSD. Scott and Stradling (1992) suggest there is considerable variation in response

and that only a minority of those exposed to trauma will subsequently experience chronic PTSD. They suggest three vulnerability factors contribute to the likelihood of the disorder developing. These are: high levels of stress or exposure; pre-existing personality or emotional disorder, such as behavioural problems, anxiety, or depression; and a family history of psychiatric disorder. Those with an adaptive coping style or an effective support network are more likely to have the resources to deal effectively with their traumatic exposure.

Many studies have found that those with PTSD do have high levels of hypnotisability (Evans, 1994; Spiegel, Hunt, & Dondershine, 1988; Stutman & Bliss, 1985), although it is not clear whether someone with high hypnotisability is therefore more likely to experience PTSD, or whether the traumatic experience heightens hypnotisability.

Hypnosis involves not only dissociation, but also intense ability to focus. It is this focusing or absorption which causes the client to dissociate from her/his immediate surroundings (Burrows, 1988). Those suffering from PTSD both dissociate and focus on the traumatic event by reliving the experience.

From a clinical perspective, it is important to initiate therapy as soon as possible after the event (Evans, 1991, 1994; Spiegel, Koopman, & Classen, 1994), although the latter recognise that this is not always possible. They suggest “days after the traumatic event, anger, depression, and other symptoms are likely to intensify among many survivors, sensitising them to the continuing psychological impact of the event and perhaps increasing their receptivity to psychological help and support” (p. 19). In other words, without treatment, symptoms may be exacerbated.

The efficacy of hypnosis in the treatment of PTSD is well documented (Evans, 1991; Spiegel, 1988; Spiegel et al., 1994). Leung (1994), for example, reports a study in which the efficiency and effectiveness of hypnosis as a treatment strategy is described. It makes therapeutic sense to utilise a client’s capacity for dissociation and absorption in dealing with their dysfunctional behaviour, cognitions, and inappropriate affect. Evans (1991) noted that hypnosis may be used to minimise and control the client’s anxiety, to recover repressed or dissociated memories of the event, and to reintegrate the client’s experience, although he cautions that the therapist must be aware of the high hypnotisability of many sufferers of PTSD and avoid exacerbating the problems of the client.

## BACKGROUND

Alastair was a 27-year-old male who lived at home with his parents. He had not had a serious romantic relationship, although he did have a current girlfriend. My sense of Alastair was that he was immature, in that he did not have the commitments and responsibilities of most men of his age. To me he seemed much younger than 27.

Six months prior to his consultation, Alastair had been the victim of an armed hold-up in the early hours of the morning, while he was working at a convenience store. He was on his own in the store at the time. After the robber took money from the register, he made Alastair lie on the floor while he escaped. The attacker was armed with a handgun, was wearing a balaclava, and he had seemed “spaced out.” Alastair found this particularly frightening, as he felt this meant it was impossible to predict what the perpetrator would do.

Alastair remembered the circumstances of the robbery in vivid detail, including his thoughts at the time. He did not feel any fear while being robbed; on the contrary, he remembered thinking very coolly and rationally. His description of his reaction suggested depersonalisation, as he reported feeling very cold, clear, and rational while the hold-up was in progress. Under extreme threat, he had dissociated from his emotions in order to cope with the situation.

## PRESENTING PROBLEM

Alastair presented with a number of symptoms typical of PTSD. His distress at these symptoms motivated his seeking professional advice. He reported that, for about three weeks after the traumatic event, he had been unable to sleep. Now he could sleep, but had frightening dreams in which there were strong feelings of fear. These dreams had no visual component, but they were extremely upsetting.

An added concern was that he felt he was now sleeping too much. Prior to the robbery, he exercised regularly at a gym and required only seven to eight hours sleep. At this time, he was not going to the gym, but felt he needed at least 10 hours sleep per night, and then found it difficult to get out of bed.

Alastair reported what he termed “feeling flashbacks” in which he did not “see” anything, but experienced enormous fear and dread. Subsequent discussion indicated that the term “flashback” was inappropriate, as Alastair did not feel fear at the time of the robbery. In fact, he remembered feeling very cool and unemotional, as indicated above. Now, however, he was experiencing

the emotions which he had not felt while being threatened and yet was not experiencing cognitive recall.

The issue which had precipitated his visit for counselling was his feeling of extremely high levels of anger which he felt were “bottled up,” which was frustrating, as he did not know how to vent that anger. Although he raced cars for a hobby, this did not help alleviate the aggression he was feeling. He also felt he was re-evaluating his life and his relationships since the trauma. Two relationships he had with girlfriends had broken up because could not deal with the expectations of the two young women concerned. He felt his level of concentration was poor, and that he had no patience with people. He realised, with the latter, that he was being irrational, but he felt powerless to stop it. His symptoms had been exacerbated when a drunk came into the store three weeks after the robbery and said “This is a hold-up!” Alastair said all the feelings came rushing back to him at that point and had persisted since then.

## **DIAGNOSIS**

Alastair's symptoms met the criteria for a diagnosis of ASD (DSM-IV) in the initial period following the hold-up. He was exposed to a life-threatening traumatic event in which he felt fear and helplessness (Criterion A) and experienced detachment, depersonalisation, and a reduction in awareness at the time (Criterion B). Subsequently, he re-experienced the emotions connected with the event (Criterion C), avoided working in the store (Criterion D), suffered increased arousal (anger) (Criterion E) and social impairment, as reflected in his breakdown in relationships (Criterion F). Onset of these symptoms was within four weeks of the trauma (Criterion G), which could not be related to any substance use or other cause (Criterion H). As the ASD symptoms of Criteria C, D, E, and F persisted for longer than four weeks, a diagnosis of PTSD was made.

The aim of therapy was to help Alastair reintegrate the experience of the trauma into his life and so alleviate the fragmentation of self which had prevented him from functioning adaptively. Regressing to the event, to allow him to work through the feelings associated with the trauma, was a means of helping him integrate his sense of self with the traumatic event he had experienced. Another goal of therapy was to combine hypnosis and cognitive behavioural therapy to help Alastair put the trauma into the past, putting a boundary around it so that he would then be able to move on.

## TREATMENT

### Session 1

This session was spent allowing Alastair to tell his story, which he had not been able to do with anyone else. This seemed to help to reduce his arousal levels. He responded positively to my acknowledgment that he had indeed been in an exceedingly dangerous and frightening situation, an acknowledgment which is particularly important in the case of PTSD victims (Evans, 1991). I felt, as in any therapeutic relationship, that it was important to build rapport with the client.

### Session 2

Alastair reported he was extremely stressed. He had been unable to concentrate and had been experiencing bad dreams, in which a man with a knife was moving towards him. In his dream, he ran away, but he left behind a woman and a child whom he knew, knowing they would be hurt.

We discussed the meaning of the dream for him and I suggested running away was a manifestation of what he wished he had been able to do when he was held up. The woman and the child could represent his own sense of powerlessness, while the threat from the man was an acknowledgment of the very real threat he had faced.

Alastair also recognised part of the issue for him was feeling he had no control over what had happened to him. He had started visiting the gym again to regain some control over his body, to “feel good” about himself.

During this session Alastair completed the Beck Depression Inventory (BDI; Beck, 1978), on which he scored 31, indicative of extremely severe depression. He scored at the 99th percentile for both state and trait anxiety on the State-Trait Anxiety Inventory (STAI; Spielberger, 1966) and had extraordinarily high state anger (94th percentile) on the State-Trait Anger Expression Inventory (STAX-I; Spielberger, Jacobs, Russell, & Crane, 1983). The same test indicated that he tended to experience angry feelings often, which he was inclined to hold in (AX/EX at the 96th percentile; AX/In at the 98th percentile). This supported the self-report which he had provided at initial consultation.

His score on the Stanford Hypnotic Clinical Scale (SHCS; Morgan & Hilgard, 1978) was 3/5, indicating a moderate level of hypnotisability. We discussed hypnosis, and his misconceptions were addressed. He remained wary of the phenomenon.

Following this consultation, I reassessed the therapeutic goals in light of his high depression, anxiety, and anger scores. I felt that his depression was reactive in nature, as was the anger which he felt. Putting a boundary around the experience, placing it in the past so that Alastair could separate it from his current experience, would enable him to control the depressive symptoms. To this end, I felt that hypnosis used in conjunction with cognitive-behavioural therapy (CBT) remained the most appropriate course of action. The goal of therapy was to use hypnotic techniques to facilitate Alastair's integration of the trauma so he could again feel in control of his life. I felt that under hypnosis he would be able to regress to the traumatic event, thus allowing him to abreact and subsequently integrate the experience. CBT would aid his understanding of the emotions he was experiencing and enhance his strategies for dealing with them, at the same time helping him normalise his reactions.

### **Session 3**

Alastair's anxiety level was extremely high at this session, as he had a forthcoming exam. We arranged an application for deferral of the exam and special consideration. This seemed to alleviate much of his anxiety. He said he was feeling very alone, left out of the mainstream of life. However, he was still feeling high levels of anger, which he was unable to focus.

During this session an hypnotic induction was carried out. Alastair was quite comfortable with heights and water, but did not want any imagery of enclosed spaces. He said he wanted an open space, so that he could see everything.

Induction was achieved using progressive muscle relaxation, to help to reduce his high arousal. Deepening was achieved by taking him down a path to a large white beach, with clear, shallow water, a safe place where he could feel secure and relaxed and not be disturbed by anyone. He was allowed to experience this for a while before being asked to walk back up the path to re-alert.

As Alastair was wary of hypnosis, it was felt that a non-threatening induction and a light trance in which deeper issues were not addressed would desensitise him to hypnosis.

During the following discussion, Alastair said he liked being in that place and felt more relaxed after spending time there. His feelings regarding himself were more positive and we spent some time discussing the amount of control the client maintains while in trance.

## Session 4

When Alastair arrived for this session, he seemed to have forgotten the positive aspects of hypnosis and was now resistant to its use. Instead, we talked of the robbery and his feelings in relation to it. He was feeling isolated from family and friends, who he felt were trying to “fix things up” for him, without allowing him to vent his suppressed emotions. We then discussed hypnosis and some of his anxieties and misperceptions were addressed. Although Alastair was wary, he decided to try it. He stated he wanted a different induction this time. This was an opportunity to reinforce his belief in his capacity to regain control over his environment, so we discussed various techniques. He decided on the eye-roll technique (Spiegel & Spiegel, 1988). This appeared successful, as judged by his slower, more rhythmic breathing rate, which was somewhat surprising considering his earlier resistance. It may have been that when he felt a sense of control, he was able to allow himself to fully experience the phenomenon.

Deepening was achieved by asking Alastair to imagine riding down in an elevator (Kroger, 1977), with the various levels representing earlier stages in his life. Above him were floors representing his future. He was then asked, when ready, to go to the level that represented the robbery. This was somewhat distressing for him and he did not want to get out of the lift. When asked, he said he wished to leave that level. This suggestion was made and the session was terminated immediately after he took himself to his safe place on his solitary beach, to regain a sense of calmness and tranquillity. His feelings were then processed and it was reinforced to him that he would not be forced to experience anything that he was not ready to confront. It was extremely important for him to have complete trust in that and in me.

## Session 5

Alastair seemed more comfortable when he arrived for this session. He asked to lie on the floor rather than sit in a chair for hypnosis and also asked for a different induction. I asked him to focus on a spot on the wall and suggested his eyelids would become heavy, until he felt it was more comfortable to close them. Deepening was achieved by suggesting a bucket hanging on his wrist, gradually filling with sand. As it became heavier, his arm would gradually lower to the floor. This occurred without hesitation.

Alastair was then taught anchoring, by tapping one finger on the other hand. I suggested that, when he did this, he would return to his special place



where he was safe, tranquil, and relaxed. The agreed purpose of the session was to again attempt to have Alastair regress to the hold-up. He was closely monitored, particularly with respect to his breathing, to ensure that his distress did not become too great.

The elevator technique was again used to take him back to the trauma. This method was used so that Alastair could control when he opened the doors and whether he stepped out of the elevator to become part of the scene. He was also able to step back into the elevator at any time, shut the doors, and leave that level.

Alastair was able to reach the point where he could open the doors of the elevator and could see the arm and the balaclava of the robber, although this was a slow process in which a deal of anchoring was required. It was effective in reducing his anxiety to a level where he was willing to resume his attempt to return to the hold-up. Trance was terminated when I felt enough progress had been made in the session for the moment.

During our discussion after re-alerting, Alastair was positive about the experience, expressing surprise at the amount of control he felt he had in trance. He was extremely keen to continue our sessions and felt accessing his feelings during the hold-up was essential to his “survival.” He expressed the belief that his PTSD was stopping him from living. His view was strikingly evocative of the view of Spiegel et al. (1988) regarding trauma and dissociation and the subsequent diminution of quality of life.

## **Session 6**

Alastair had some success in his car racing. He reported he was enjoying the social side of his sport and this was unusual for him since the hold-up. He expressed positive feelings, including a feeling of inner strength. This related to his sense of taking back control over his life. After discussion, he decided he would like a progressive muscle relaxation induction. Deepening again involved walking down a path to his special place. Anchoring was reinforced.

In this session, regression was achieved by having the client imagine climbing down a ladder to a window, on the other side of which was the robbery. Again, Alastair had control, as he determined when he opened the window. I made the suggestion it was a very strong window through which bullets could not penetrate and no-one could see through it from either direction. He had the choice of either opening it and looking through, or climbing through it to the other side.

There was much reluctance on Alastair's part to approaching the window. I continued to make anchoring suggestions and he occasionally did this spontaneously. Finally, he entered the room. A breakthrough came when he was asked to examine what it was inside him that was causing this enormous fear and he said that he was afraid of being raped.

When we discussed this after reorienting from the trance, Alastair said he had not realised the fear of being raped was there, but that he was now aware that it was. This was a striking example of the idiosyncratic nature of reactions to a traumatic event. As Scott and Stradling (1992) suggested, it is the personal meaning of the event which determines the reaction of the individual.

## **Session 7**

Alastair said he knew what the terrible fear inside him was, but he felt that it was unfinished. He reported his concentration was improving, but his memory was still poor. My sense was that he wanted miracles from hypnosis. He needed to be made aware the best he could expect was a return to his pre-trauma levels of functioning. Alastair was also beginning to see some positive aspects to the hold-up, feeling that it precipitated an examination of aspects of himself and his life.

A trance was again induced and Alastair was regressed to the hold-up. He experienced far less anxiety this time. My therapeutic goal at this stage was to have the robber leave the store after stealing the money, symbolically walking out of his life. When this suggestion was made, Alastair became distressed and said the robber was stuck in the door and could not get out. When asked to describe what was happening, he reported the robber had taken out his penis, and that it was erect. His breathing became rapid again, so the suggestion was made that he was in his special place, feeling calm and relaxed. Alastair was then brought out of trance. During debriefing when I questioned him about the actual behaviour of the robber, he confirmed that there were no sexual overtones.

I had a sense of relief the session had to be ended then, as I felt concerned I was getting into areas beyond my expertise. One aspect that concerned me was whether Alastair was fantasising and receiving some sexual gratification from telling me explicit sexual details.

My meeting with an experienced counsellor clarified these issues for me and I decided I would go with Alastair's direction, but that the next session should not be hypnosis, but an evaluation of where we were going with

therapy in general, and hypnosis in particular. This became a valuable session, in that many issues were examined and some aspects clarified for him. He reported that, during the last session, he had felt a mixture of anticipation and fear. There was some sexual excitement and a sense of wanting to “get it over with.” He found it extremely difficult to describe his emotions when asked to do so. He was not aware of having felt sexually threatened before, although he felt that he had not really confronted his sexuality. There was clearly some ambivalence there.

Alastair said he had a rich fantasy life, with occasional homosexual fantasies. He felt a fear of being raped had affected his sexual life and this may have been the cause of his not trusting his ex-girlfriend. I felt it might be necessary for him to take his fantasy to completion under hypnosis, in order to psychologically complete his experience. Use of an affect bridge to access possible earlier sexually threatening situations would also be beneficial.

## **Session 8**

Alastair was keen to analyse what was happening. He presented as more assertive and began our session by saying he was “feeling very heterosexual.” He also said he felt his memory and concentration were improving.

When we began the induction he seemed very nervous, with a deal of nervous laughter, and gave me many instructions as to what techniques he wanted me to use. After induction and deepening, the rape scene was suggested. The affect bridge elicited nothing. He did not recall feeling like this before.

I suggested he take the rape through to its conclusion. Alastair said the image froze when the robber was about to rape him. He spontaneously reversed the roles and found that the same thing happened. He did not feel he wanted to rape the robber. Alastair then went to his safe, special place, prior to being reoriented.

During discussion following this hypnotic session, Alastair said he felt the issue regarding his sexuality had now been resolved. He felt no doubt as to his heterosexuality, because when given the opportunity, his unconscious had chosen not to travel down the path of homosexuality. We discussed the differences between fantasy and reality and the ability to experiment in our fantasy life with behaviours which would be too threatening in reality.

It was decided to conclude therapy. Neither he nor I felt further sessions were necessary in the immediate future, although I stressed to him he should contact me if any unforeseen issues arose.

Alastair was reassessed on the BDI, on which his score had reduced in the three months of therapy from 31 to 4. He had gone from the 99th percentile on the STAI state and trait anxiety to the 58th percentile (state) and 64th percentile (trait). His anger levels had reduced to less than the mean.

## Follow-Up

Alastair was contacted a month after his final session. He reported life was going well for him and that he was managing his studies again. As a postscript, four months after our final session I received a letter from Alastair saying that, much to his surprise, he had passed all of his exams and was now enrolling in his final year.

## SUMMARY

Alastair was suffering from PTSD after being the victim of an armed robbery. The robbery had stirred unconscious images of arousal and excitement with which he could not deal. His PTSD symptoms were exacerbated by these unresolved and unconscious issues related to his sexuality. His prone position on the floor and total vulnerability had resulted in a fear of rape that was also tinged with excitement. Although there had been no sexual overtones in the robbery, sexual feelings had been aroused, an example of the importance of the personal meaning of an event in determining PTSD reactions (Scott & Stradling, 1992). Hypnosis allowed his unconscious to take the fantasy as far as he wanted. Alastair felt that his wish not to take the rape to its conclusion, indeed his inability to do so, helped him satisfactorily resolve his sexual guilt feelings.

The efficacy of hypnosis was apparent, in that it allowed him to make the decision free from the conscious constraints under which he had previously been operating.

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|--|---|
| Roger P. Allen                               | <i>Scripts and Strategies in Hypnotherapy.</i><br>Carmarthen: Crown House Publishing, 1997.         |
| Rubin Battino                                | <i>Guided Imagery and Other Approaches to Healing.</i><br>Carmarthen: Crown House Publishing, 2000. |
| Rubin Battino &<br>Thomas L. South           | <i>Ericksonian Approaches: A Comprehensive Manual.</i> Carmarthen: Crown House Publishing, 1999.    |
| George Gafner &<br>Sonja Benson              | <i>Handbook of Hypnotic Inductions.</i><br>New York: W.W. Norton & Co, 2000.                        |
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| Marty Sapp                                   | <i>Hypnosis, Dissociation, and Absorption.</i><br>Charles C. Thomas, 2000.                          |

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