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CLINICAL AND EXPERIMENTAL HYPNOSIS**

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EDITORIAL

Well, we will “get by with a little bit of help from our friends” across the world, and by the next issue, in May 2006, we would expect to see more articles from other countries being published in the *AJCEH*. Research articles have been promised from the U.S.A. and Europe, and books to be reviewed are now coming in from around the world. So the “winged messengers” are already at work thanks to cyberspace communications.

At the same time, *AJCEH* will feature work from the Southern Hemisphere in terms of Australasian scripts, valued Australasian case studies and notes which have been the mainstay of the journal in recent years, and soon we will be adding South African research to that of the Australian and New Zealand studies.

The current issue contains research results, literature reviews, conceptual models and theoretical explorations, case studies, scripts, and reviews. There is a theme of mind-body healing in the articles by Paul Neumann and by Norm Barling and Susan Raine, and the review by June Henry of *Yoga Nidra*. Spirit enters the edition as well, with the article by William Pitty and that by Marek Celinski and Kathryn Gow, to be embedded in our unconscious and perhaps superconscious by way of the script by Patrick McCarthy. Graham Jamieson reminds us of the essential hypnosis research with an analysis of absorption. Beliefs in hypnosis are depicted in the case by Annette Brock and the film review by Kathryn Gow.

There are several ways that you can support the journal: Submit material for publication; encourage others to submit articles, case studies, reviews or scripts; recommend books and films for review; and order the journal for your university libraries.

I am happy to receive submissions as a result of either unconscious or conscious decisions to share your experiences with hypnosis and related topics, because if you do not share them, then who will?

Kathryn Gow
November 2005

THE MODIFIED TELLEGEN ABSORPTION SCALE: A CLEARER WINDOW ON THE STRUCTURE AND MEANING OF ABSORPTION

Graham A. Jamieson

University of New England, University of Queensland

The structure of absorption was examined through factor analysis ($N = 352$) of a modified absorption questionnaire, MODTAS. A coherent single latent trait was not predicted by response expectancy theory. The Likert scaled MODTAS had five oblique rotated (i.e., intercorrelated) primary factors (synaesthesia, ASC, aesthetic involvement, imaginative involvement, ESP) and a single higher order factor. In an independent sample ($N = 110$), all MODTAS subscales significantly predicted high versus low hypnotisability. Contrary to predictions from response expectancy theory, a comparison of multiple regression models showed that these relationships were mediated by common variance with the single latent trait. Absorption is placed in the context of central and somatic psychophysiology of self-regulation. MODTAS should be adopted in future absorption research. It is presented in Appendices along with normative item response data.

Tellegen and Atkinson (1974) reported the development of a questionnaire said to tap a personality trait named by them as “absorption.” The criterion for inclusion in the Tellegen Absorption Scale (TAS), as it came to be called, was the prediction of hypnotic susceptibility. Items were drawn from a larger pool previously proposed for that purpose. They reported that not only was the TAS significantly correlated with hypnotic susceptibility, but that it was unrelated to previous personality measures such as extraversion and neuroticism (as was hypnotisability). Rather, the TAS seemed to tap aspects of experience not commonly shared or communicated in ordinary social life.

The author wishes to thank Peter Sheehan for his support and encouragement of this research and Catherine Kumar for her assistance in the preparation of the manuscript.

Requests for reprints should be sent to Graham Jamieson, School of Psychology, University of New England, Armidale, N.S.W. 2351. Inquires concerning scales or analyses can be directed via email to graham_jamieson@hotmail.com.

Tellegen and Atkinson proposed an initial definition of the shared content of absorption items in terms of deep involvement (thus absorption) with the object of experience. This involvement was first formulated in terms of “total attention involving a full commitment of available perceptual, motoric, imaginative and ideational resources to a unified representation of the attentional object” (Tellegen & Atkinson, 1974, p. 274). Consequently absorption has often been presented as strongly focused attentional control; however, closer scrutiny shows these experiences to be the very antithesis of strategic attentional control (Jamieson & Sheehan, 2004; Qualls & Sheehan, 1981).

Against this background, Tellegen made two further important (but largely ignored) proposals for the definition of absorption. Tellegen distinguished between two different modes of engaging with the object of experience: the “instrumental set” employs “active, realistic, voluntary and relatively effortful planning, and decision making and goal directed behaviour” (Tellegen, 1981, p. 222). The “experiential set,” however, requires the surrender of the instrumental set and is further characterised by an effortless, non-volitional quality of deep involvement with the objects of consciousness. The trait of absorption was defined as the disposition, *in appropriate circumstances*, to surrender the instrumental set and adopt an experiential set. The self-altering nature of the phenomenology of these experiences also led Tellegen to a third definition in terms of a disposition to enter states marked by a restructuring of conventional cognitive representations, that is, “the capacity for marked restructuring of one’s phenomenal field, especially the self and its boundaries” (Tellegen, 1992).

A turning point came for research on absorption when Council, Kirsch, and Hafner (1986) published a study which threatened to turn the understanding of the absorption hypnosis relationship on its head. Guided by response expectancy, rather than dispositional trait theories, they compared the correlation between the TAS and hypnotic susceptibility when the TAS was administered just prior to hypnotic induction and when it was administered in a context unconnected with hypnosis testing. According to that theory, changes in response expectancies (a ubiquitous psychological influence) in the hypnotic context elicit automatic changes in experience, behaviour, and physiology (just as they do in everyday life) incorrectly attributed to exotic state like changes by the hypnotised person (see e.g., Kirsch & Lynn, 1997). Administering the TAS prior to hypnosis was held to modify an individual’s expectancy for responding positively to hypnotic suggestions (the final

determinant of hypnotic responding in this model) to correspond with their immediate self-perception of having endorsed items describing major alterations in everyday experience. As predicted, the correlation with hypnotic susceptibility was significant when the TAS was administered in the hypnosis related context, but much smaller and non significant when it was administered in an independent context.

Since then, a see-sawing battle has been waged in the literature between supporters of an intrinsic link between (the traits of) absorption and hypnotic susceptibility and those who support the response expectancy interpretation. It is beyond the scope of this paper to review the twists and turns in this large and important body of literature. Rather, the present paper focuses on the implications of the response expectancy account for the meaning and interpretation of absorption itself. If Council et al. (1986) are correct, then the only feature that the TAS items can be expected to have in common is that they are perceived to describe a set of unordinary experiences. It is the endorsement (or non-endorsement) of these items which alters people's expectancies of being able to have other unordinary experiences during hypnosis. The content of the TAS was selected on the criterion of predicting hypnotic susceptibility, so if the scale has no independent relationship with susceptibility, then it is a mere collection of "odd" items and does not measure a latent disposition at all. Not only is the relationship of the TAS with susceptibility an artefact of testing context, but so is the trait of absorption itself.

In that case, absorption research will be a dead end with no importance for wider human psychology. This would certainly explain the consistent failure of the TAS to fit within the framework of established personality traits. For instance, despite attempts to fit it within "Openness" in the Big Five model, it does not correlate with other aspects of that construct such as social liberalism or intelligence (Glisky, Tataryn, Tobias, Kihlstrom, & McConkey, 1991). Council et al. (1986) inspired a burst of research activity focused on the context effect; however, basic research on the nature of absorption as a psychological trait has been relatively ignored (a trend already apparent to Roche and McConkey, 1990). While this may not have been the intention of Council et al., it is both the logical implication and the practical consequence of their position.

Outside the fields of hypnosis research and personality psychology, however, absorption has steadily shown itself to be a useful variable, particularly within studies related to human psychophysiology (and in particular to self-regulatory

processes). Qualls and Sheehan (1981) found that absorption moderated the effect of different self-regulation strategies on electromyogram biofeedback in the reduction of frontalis muscle tension. High absorption individuals were unable to make effective use of the external information signal, but were effective when allowed to use self-generated internal imaginings. For low absorption individuals, the pattern of change was the exact opposite. These findings directly contributed to Tellegen's (1981) redefinition of the trait in terms of a context sensitive disposition to engage in instrumental or experiential mental sets.

In a series of four studies by Kuiken and Nielson (1996), self-reports of orienting response related movement inhibition were significantly related to absorption on each occasion. In those studies, the TAS was administered interspersed in a total set of either 60 or 300 test items to control for possible effects of demand characteristics. Gick, McLeod, and Hulihan (1997) reported that absorption was significantly positively related to measures of somatisation and global distress in a clinical population. Absorption (but not imagery ability or imagery use) was significantly higher in those who could successfully make use of guided imagery instructions to relieve anxiety induced by the anticipation of a stressful task (Kwekkeboom, Huseby-Moore, & Ward, 1998). Zachariae, Jorgensen, Bjerring, and Svendsen (2000) found that absorption was a significant predictor of autonomic reactivity (heart rate variability) responses to both experimental stressor and relaxation conditions. In a recent psychoneuroimmunology study, Ehrnooth et al. (2002) found that higher absorption scores were significantly related to greater physiological stress reactivity. Participants with above-median absorption scores showed greater increases in cortisol and percentage of lymphocytes, and greater decreases in percentage of neutrophil cells after stress. While such findings are certainly in need of replication (and integration into a coherent theoretical framework), they are strongly suggestive that absorption measures an important trait with deep roots in the psychobiology of self-regulation.

A critical issue in the evaluation of absorption as a psychological trait is the appropriate model of the covariance structure of the instrument and its domain. If Council et al. (1986) are correct, then absorption does not measure a latent psychological variable and thus the covariance structure of absorption will not be represented by either a single latent variable or a single higher order latent variable. It will instead be a rag bag of mostly unassociated items with a large number of small clusters of items reflecting mainly spurious chance correlations between pairs of items and showing no organisation across

the many small clusters. In that case, a plot of the eigenvalues of successive principal components of the correlation matrix would not be expected to show a sharp “break,” after which successive components added little to the total variance explained (Cattell, 1966). This is because the common variance (represented by the inter item correlation matrix) will be local and thus restricted to numerous small groups of items. That will be the case, if the scale is a collection of unrelated fragments with no coherent large scale structure. At best, the scale could be a collection of unrelated content areas, with any relationship with hypnotic susceptibility being mediated by common contextually conferred meaning, rather than by common variance with a latent trait of absorption.

The aims of the following studies are to clarify the covariance structure of the domain of absorption, the nature of any meaningful components, and the nature of their relationship with each other and with hypnotic susceptibility. Study 1 will undertake an exploratory analysis to identify the latent variable model which best captures the covariance structure of the items comprising the absorption questionnaire. If the response expectancy account is correct, no coherent unitary structure is expected to emerge. Study 2 will examine the relationships between those meaningful components of the item covariance structure identified in Study 1 and hypnotic susceptibility. In particular, it will ask whether these relationships are mediated by the unique variance of each factor (as the response expectancy model would entail) or instead by the common variance they share with each other and a higher order latent variable “absorption”.

STUDY 1

The original TAS utilises a dichotomous true/false response format; however, many items use frequency terms such as “sometimes” and “often,” while others use dispositional terms such as “can,” “may,” or “could.” It is to be expected that the initial response format of the TAS will result in an arbitrary dichotomisation of a continuous frequency distribution for each item. In that case, the variance of the manifest item responses would under-represent the underlying item variance, resulting in an obscured picture of the item covariance structure and an under-representation of the common variance present. Consequently, a modified form of the absorption questionnaire with a Likert scaled frequency response format was adopted in the following studies. Jamieson (1986) gives a detailed comparison of the psychometric

properties of the original TAS and the modified form adopted here, which argues strongly for the superiority of the modified form as a standard research instrument.

Method

A modified version of the TAS named MODTAS was prepared with a Likert scaled response format asking respondents to record the frequency of their experiences on a 5-point scale ranging from 0 (never) to 4 (very often). Item wordings were adjusted to fit the new response format. Specifically, frequency words were removed from items which were, when possible, restated in the present tense. The words “or music” were removed from the end of item 10. A copy of MODTAS is reproduced in Appendix A. MODTAS was administered to 352 first-year psychology students at an Australian university who volunteered for testing. Participants received the following written instructions which form an integral part of the MODTAS questionnaire. They include a plea for honesty:

Please fill in the following questionnaire by circling the number which corresponds to how frequently each of the following statements is true of your experience. Where 0 means “never,” 1 means “at least once,” 2 means “occasionally,” 3 means “often,” and 4 means “very often.” It is imperative that you answer these questions as honestly as possible. Please do not return this questionnaire if you do not feel you have been able to cooperate with this request.

Results

Normative parameters for the distribution of total scores, individual item responses, and the inter-item correlation matrix were calculated. A principal components analysis of the correlation matrix was then carried out followed by a promax (oblique) rotated factor solution.

Total scores could range in principle from 0 to 136. The observed range was from 14 to 122, indicating that MODTAS can adequately measure both extreme lower and upper scores. The mean of the sample was 65.35 (median 65.18) and the standard deviation was 20.55. The distribution of total scores did not depart significantly from the normal distribution in either skew or kurtosis (skew = 0.18 and kurtosis = -0.30). Individual item response distributions are given in Appendix B.

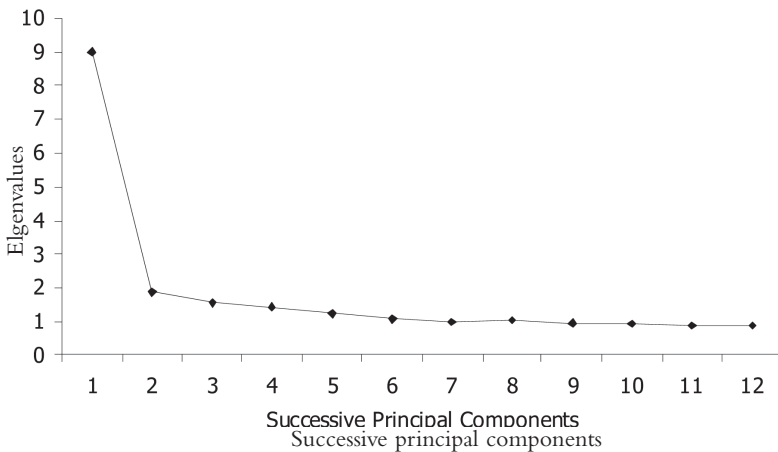
The 34 x 34 inter-item correlation matrix is too large to present here, but may be obtained from the author. The magnitude of the correlations ranged

from 0.06 to 0.45. All correlations were positive and only 13 out of 465 were smaller than 0.10. One hundred and eleven inter-item correlations were greater than 0.30 and 14 of these were greater than 0.40.

To descriptively test the prediction, deduced from Council et al (1986), of the absence of a discernable “break” in successive eigenvalues, the plot of eigenvalues for the first 12 successive principal components is presented in Figure 1. Contrary to that prediction, a “break” clearly occurs after the first component. In the context of an independent or orthogonal factor analysis approach this would indicate, by Cattell’s scree test (Cattell, 1966), a single *independent* factor solution. However, terminating the analysis at that point may fail to adequately model further genuine (but not independent) psychological variables within the item covariance structure.

The first principal component accounted for 25.53% of the total variance, which is modest for a unitary trait measure. The results of Tellegen’s earlier item content analysis (Tellegen, 1982) and factor analysis (Tellegen, 1992), as well as the author’s own factor analysis (Jamieson, 1986) of the TAS, indicated the presence of meaningful internal structure. Consequently, it was decided to further probe the internal structure of the MODTAS with an exploratory principal axes factor analysis using an oblique rotation. This allows the emergence of distinct, but not independent, latent variables as long as this improves the simple structure of the item loadings on the latent variables (pattern matrix). These correlated primary factors may (or may not) be

Figure 1: Eigenvalues of the First 12 Successive Principal Components of MODTAS



represented in turn by a further higher order factor structure.

Successive factor number solutions were promax rotated and compared on the exploratory criterion of maximising intelligibility. If the addition of another factor resulted in the emergence of a factor which intelligibly grouped items that had been scattered across factors in the preceding analysis, the higher factor number was considered as an increase in intelligibility. If an additional factor resulted in the splitting of a single previously intelligible factor into two new factors, this solution was counted as a decrease in intelligibility over the previous solution. These criteria converged on the selection of a 5-factor solution as optimally intelligible.

The pattern matrix of this 5-factor oblique solution is presented in Table 1. The factor correlation matrix is presented in Table 2. All factors were substantially intercorrelated with the others. A further principal components analysis of the factor correlation matrix indicated, both by Cattell's scree test and Kaiser's criterion of eigenvalues > 1 (Kaiser, 1974), that a single higher order factor was present. The 5-factor oblique solution (with a single higher order factor) now accounted for 35.31% of the total variance (a very substantial improvement in comparison with the terminating analysis at the first principal component; see above). This model captures the essential insight of the alternative orthogonal factor analysis solution, a single independent latent variable, but with a better representation of the scales covariance structure and of further psychologically meaningful variables within the absorption domain

Discussion

For the purposes of the present discussion, a major factor loading will be taken as an item pattern coefficient of ≥ 0.40 on a particular primary factor. Major loadings show simple structure allowing the clear identification of the content of each factor. The major loadings on Factor 1 identify its content as aesthetic involvement in nature (e.g., the highest loading, item 34: "I am deeply moved by a sunset." Factor 1 items are predominantly visual in modality, raising the question of whether corresponding scales should be developed for other sensory modalities. Factor 2 comprises items which involve profound alterations in one's sense of self or reality (an altered states of consciousness or ASC factor); for example, the highest loading item (item 9) reads: "I sometimes step outside myself and experience an entirely different state of being." Factor 3 is defined by items which tap deep involvement in vivid imaginative

Table 1: Pattern Matrix of the 5-Factor Promax Rotated Solution for MODTAS

Item ^a	Factor					Communality
	1	2	3	4	5	
1	.04	-.25	.15	-.03	.01	.15
2	<u>.35</u>	-.27	-.06	-.03	-.02	.22
3	.04	.03	.44	-.17	.13	.24
4	.05	.04	<u>.34</u>	.13	.05	.21
5	-.16	-.61	.04	.01	.13	.40
6	.61	.08	.05	-.02	-.04	.33
7	-.15	-.07	.71	-.14	-.04	.35
8	.04	-.55	.08	.16	-.08	.44
9	.03	-.81	-.11	.14	-.13	.58
10	.06	-.09	-.15	-.02	.64	.40
11	-.14	-.40	.24	.05	.14	.38
12	.16	-.11	<u>.33</u>	-.23	.25	.42
13	.05	<u>-.33</u>	.15	.04	.05	.27
14	.08	-.15	-.10	.53	.06	.39
15	.63	-.02	-.10	-.16	-.03	.40
16	.53	<u>-.31</u>	-.12	.05	.02	.47
17	.14	.21	.05	.22	.47	.39
18	-.17	.11	.67	.09	.04	.33
19	-.01	.06	.61	.19	-.07	.40
20	-.12	-.01	.50	.19	-.14	.36
21	.14	.06	.46	-.01	-.01	.26
22	-.08	.07	.53	.05	.03	.23
23	.59	.05	.29	-.09	-.20	.23
24	<u>.39</u>	-.13	.15	-.07	.13	.43
25	.11	-.20	.40	-.19	-.02	.30
26	.17	.10	.11	.14	.24	.24
27	.24	.10	.03	.02	.43	.35
28	-.14	-.08	.18	.61	.01	.47
29	-.02	-.02	<u>.36</u>	.16	.11	.29
30	.21	.06	<u>.37</u>	.18	-.05	.31
31	-.07	<u>-.34</u>	-.02	.44	.03	.39
32	.03	-.02	.55	.11	-.08	.34
33	-.15	.06	.03	.03	.76	.45
34	.77	.10	-.13	-.11	.04	.41
Sum of squares of factor loadings	2.63	2.17	3.55	1.34	1.71	

Note: Absolute loadings ≥ 0.4 are given bold type, other loadings ≥ 0.3 are underlined.

^a Items are given in full in Appendix A.

Table 2: MODTAS 5-Factor Correlation Matrix

Factor	1	2	3	4	5
1	–				
2	-.52	–			
3	.67	-.63	–		
4	.40	-.36	.44	–	
5	.66	-.52	.69	.39	–

experiences (imaginative involvement); for example, item 7: “I imagine some things so vividly they hold my attention as a good movie or story does.” All three of the items with major loadings on Factor 4 have the theme of, at least apparent, ESP experiences (e.g., item 28: “I know what someone is going to say before he or she says it”). As these are the only items of this nature on the scale, it is strongly suggested that additional items be developed to more adequately reflect this facet of the absorption measure. Factor 5 is defined by items in which experience in one sensory modality is associated with experiences in another modality (synaesthesia). For example, item 33, the highest loading item, reads: “I find that different odours have different colours.”

The covariance structure of the MODTAS appears to be best represented by these five mutually intercorrelated latent variables, with a single higher order factor (the trait of absorption) underlying their correlation matrix. This promising structural model of the trait absorption, which has emerged from the present exploratory factor analysis, now requires further testing with a confirmatory factor analysis.

STUDY 2

Method

Individuals who had previously been screened for hypnotic susceptibility on the Harvard Group Scale of Hypnotic Susceptibility Form A (HGSHS:A; Shor & Orne, 1962) and were classified as either low in hypnotic susceptibility (HGSHS:A score 0–3) or high in hypnotic susceptibility (HGSHS:A score 9–12) were posted the MODTAS questionnaire at least four weeks after their hypnosis testing session. No mention was made of hypnosis in the accompanying covering letter. Fifty-three low hypnotically susceptible and 57 high hypnotically susceptible participants voluntarily filled in and returned the questionnaire.

Results

MODTAS subscale scores were calculated for each individual as the simple sum of their responses on each major loading item, that defined each of the five primary factors identified in Study 1. Items comprising each subscale are given in Table 3. Hypnotisability was scored as 0 for low hypnotically susceptible and 1 for high hypnotically susceptible participants. The mean score of the total sample for each subscale was divided by the total number of items in that subscale to give a comparable metric which can be interpreted in terms of the original 0–4 response format. Table 4 presents the rescaled means, together with the intercorrelations of the five subscales with each other and with hypnotic susceptibility.

A multiple regression analysis of the five subscale scores on the criterion variable of hypnotic susceptibility was then conducted. Multiple regression on a dichotomous criterion variable yields equivalent results to discriminant

Table 3: MODTAS Items Included in Variable Subscales in Study 2

Variable	Items ^a
Synaesthesia	10, 17, 27, 33
ASC	5, 8, 9, 11
Aesthetic involvement in nature	6, 15, 16, 23, 34
Imaginative involvement	3, 7, 18, 19, 20, 21, 22, 25, 32
ESP	14, 28, 31

^a Item numbers correspond to numbers of items given in full in Appendix A.

Table 4: MODTAS Subscale Means and Correlations

Variable	Mean item response					
	1	2	3	4	5	
Mean	1.92	1.48	2.42	2.38	1.97	
Variable	Subscale and hypnotic susceptibility correlations*					
	1	2	3	4	5	6
1	–					
2	.69	–				
3	.70	.67	–			
4	.73	.77	.72	–		
5	.61	.71	.53	.61	–	
6	.39	.50	.37	.40	.36	–

Note: 1 = Synaesthesia; 2 = ASC; 3 = Aesthetic involvement in nature; 4 = Imaginative involvement; 5 = ESP; 6 = Hypnotic susceptibility.

N = 110, *p < .001 for all correlations.

analysis. However, multiple regression was chosen to enable the further testing of each individual predictor's unique contribution to the full regression equation. Regression equations were calculated with each of the five predictors respectively subtracted from the total set of predictors. The difference in r^2 between each of these and the full model was tested to assess the significance of the unique (as opposed to the shared) contribution of each predictor to the full regression model. The standardised and unstandardised regression coefficients for each variable in the full regression equation, together with its r and r^2 , are given in Table 5. Results of the tests of the differences in r^2 between the full model and each of the reduced models with single predictors deleted are outlined in Table 6.

Discussion

The correlations amongst MODTAS subscales are all significant, substantial in

Table 5: Multiple Regression Equations

Model	Variable	Beta	<i>b</i>
Full model ^a	1	.07	.01
	2	.43	.05
	3	.03	.00
	4	.00	.00
	5	.00	.00
regression constant = .10			

Note: 1 = Synaesthesia; 2 = ASC; 3 = Aesthetic involvement in nature; 4 = Imaginative involvement; 5 = ESP.

^a $r = .50$, $r^2 = .25$, $N = 110$, $p = .0001$.

Table 6: Unique Contributions of Individual Subscales as Predictors of Hypnotic Susceptibility

Variable	r^2 full model – r^2 reduced model	F^a	<i>p</i>
Synaesthesia	.00	.06	.99
ASC	.06	1.96	.11
Aesthetic involvement in nature	.00	.01	1.00
Imaginative involvement	.00	.00	1.00
ESP	.00	.00	1.00

^a $df = (4, 104)$.

magnitude, and positive in direction (see Table 4), further supporting the findings of Study 1 that they comprise a higher order factor. Likewise, correlations between all MODTAS subscales and hypnotic susceptibility are significant and positive. The r^2 of the full regression model with hypnotic susceptibility is highly significant. Furthermore, the deletion of no single predictor results in a significant change in the r^2 of the model (see Table 5). No predictor variable makes a significant unique contribution to the prediction of hypnotic susceptibility by the full model, even though all predictors (MODTAS subscales) are substantially correlated with susceptibility. Thus the relationship of these predictors to the criterion (susceptibility) must be interpreted as resulting from their common variance, which is from the higher order factor present, rather than from the specific variance of each MODTAS subscale.

The context of hypnosis testing and administration of the MODTAS questionnaire were well separated in space and time and hypnosis testing preceded the questionnaire by at least a month. No direct information was given in the accompanying letter to link the two. However, a contextual association cannot be entirely ruled out. Participants may have been sensitised to infer or suspect such a link due to the presence of independent experimenters actively seeking to recruit participants from the same pool for their own concurrent hypnosis experiments.

GENERAL DISCUSSION

The studies reported here aimed to explore the structure and meaning of the trait absorption identified by Tellegen and Atkinson (1974). They utilised a modified Likert scaled version of that questionnaire MODTAS. The items of MODTAS share approximately 50% more common variance and consequently have a much clearer covariance structure than the original TAS (Jamieson, 1986). The structure of absorption revealed by the factor analysis of MODTAS in Study 1 showed it consisted of five primary factors and a single higher order factor. Contrary to expectations deduced from the response expectancy account of its relationship with hypnotic susceptibility (the criterion by which the TAS was created), MODTAS was not a rag bag of independent items connected only by spurious random inter-item correlations. This was immediately evident from the plot of eigenvalues for successive principal components (see Figure 1, above). Neither was it comprised of a simple collection of content areas, essentially asking similar questions, but otherwise

with no unifying structure. Exploratory factor analysis using an oblique (promax) rotation identified five primary factors which were named and interpreted as “synaesthesia,” “altered states of consciousness,” aesthetic involvement in nature,” “imaginative involvement,” and apparent experiences of “extra sensory perception” (see Table 1).

An examination of the factor correlation matrix (Table 2) shows all primary factors to be mutually intercorrelated and a further analysis of this matrix showed a single higher order factor to be present. Absorption then does correspond to a single latent trait independently of any measurement of hypnotic susceptibility. This finding is not consistent with absorption having been created by a contextual artefact. This solution should now be tested by a confirmatory factor analysis on an independent MODTAS data set. Full details of the item response distributions obtained in Study 1 are available for normative purposes in Appendix B.

Study 2 sought to assess whether the latent primary level variables within absorption (see Table 3) were related to hypnotic susceptibility through their shared variance or independently through their unique variance. All MODTAS subscales were significant predictors of high versus low hypnotic susceptibility (Table 4). Multiple regression was used to test the unique contribution of each subscale to the full regression model. The full model correlated 0.5 with high versus low susceptibility (see Table 5). However, no individual subscale made a significant unique contribution to the prediction of high versus low hypnotic susceptibility (Table 6). Instead, their relationship with hypnotic susceptibility was mediated almost entirely by their common variance, that is, by the single higher order factor of absorption. These results are again inconsistent with predictions derived from a response expectancy account of the relationship between absorption and the criterion by which it was developed.

There is wide consensus that context effects do impact on the correlation of absorption with hypnotic susceptibility; however, there is still disagreement over whether they exhaust this relationship, and what they may mean for the nature of hypnosis (see, e.g., Barnier & McConkey, 1999; Kirsch, Milling & Burgess, 2000; Zachariae, Jorgensen, & Christensen, 2000). The focus of the present paper, however, is not what the absorption hypnosis relationship means for hypnosis. We will be unlikely to advance our understanding of the role of absorption in hypnosis (whatever that may be) until we have a much clearer understanding of the nature of the trait absorption itself. Therefore, the question asked here is: “What are the implications of the absorption hypnosis relationship for understanding absorption?”

Previous hypnosis research has already focused on imaginative involvement, one of the five primary components of absorption identified here. Further investigation of the other primary factors in relation to hypnosis may throw additional light on the nature of the underlying shared process indicated in Study 2. For example, synaesthesia has recently been the focus of renewed investigation with the tools of cognitive neuroscience (Nunn et al., 2002) and an understanding is beginning to develop of its genetic, developmental, and neurophysiological underpinnings. The relationship of these processes to the trait of absorption has yet to be explored. The factor subscales derived for the experiences of synaesthesia, ASC, and ESP should be further developed and expanded as part of a broader inquiry into the nature of these components of absorption. It is by no means certain that the primary factors identified within the absorption questionnaire exhaust the entire domain of expression of the higher order factor. Additional informative content may have been identified by Josephine Hilgard (1979), for example, regarding religious experience; Wilson and Barber (1983), for example, with respect to experiences of the supernatural; and Barrett (1996), for example, in relation to disruptions in control, memory, and identity.

A renaissance of absorption research will not come about by ploughing the same well worn furrows. Recently, Rainville, Hofbauer, Bushnell, Duncan, and Price (2002) published the first (PET) imaging study of regional cerebral blood flow changes associated with self-rated experience of absorption. This study did not make use of the absorption questionnaire (and so the connection with trait absorption needs further confirmation). However, absorption specific changes in activity were found in the pons, the thalamus, and the anterior cingulate cortex. Each neural structure is deeply implicated in the regulation of conscious experience. The trait absorption may be closely linked to the self-regulation of both central and somatic psychophysiological processes. If so, this is a form of self-regulation quite distinct from the effortful, volitional implementation of cognitive strategies that form the core of Tellegen's instrumental set.

This may be the most fruitful framework within which to pursue a basic understanding of the trait absorption. For example, working within this framework Ott and colleagues have made a series of important discoveries. Ott, Sammer, and Vaitl (2002) have reported a significant positive relationship between trait absorption and baroreflex sensitivity; that is, the sensitivity of the integrated peripheral and central system for the regulation of heart rate in response to changes in blood pressure. This result has so far been found in two

independent studies. Ott and his coworkers have found further evidence for a biological base for the trait absorption. Those with a genetic polymorphism linked to a stronger binding potential of the 5-HT_{2A} receptor (the target site of hallucinogenic drugs such as LSD) had significantly higher absorption scores (Ott, Reuter, Hennig, & Vaitl, 2005). There was also a significant interaction between that genetic polymorphism and another related to the neurotransmitter dopamine (which plays a critical role in the regulation anterior cortical functions). A revised psychometric instrument such as MODTAS, with a single higher order factor spanning a well-defined and diverse domain adequately sampled by primary factors, will make an important contribution to the success of these unfolding research programs.

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APPENDIX A

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APPENDIX A

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APPENDIX B

MODTAS ITEM RESPONSE DISTRIBUTION

Item ^a	Value					
	N	0	1	2	3	4
1	352	43	97	163	41	8
2	352	21	69	135	94	33
3	352	39	64	123	87	39
4	351	38	69	121	81	42
5	248	173	81	52	29	13
6	352	22	57	119	111	43
7	352	19	46	103	97	87
8	352	89	103	89	46	25
9	352	158	93	62	23	16
10	352	146	61	72	52	21
11	347	111	90	101	36	9
12	352	33	62	111	92	54
13	351	150	75	64	38	24
14	352	37	77	111	98	29
15	352	44	65	84	92	67
16	351	70	80	92	67	42
17	352	29	51	109	96	67
18	352	21	52	103	108	68
19	351	18	55	93	114	71
20	351	5	44	115	133	54
21	351	83	82	73	73	40
22	351	40	56	105	95	55
23	351	35	72	100	81	63
24	351	81	66	83	79	42
25	352	104	76	82	69	21
26	351	40	64	78	97	72
27	350	56	64	103	76	51
28	352	20	77	121	101	33
29	352	55	71	114	77	35
30	352	42	86	102	89	33
31	352	84	95	88	61	24
32	351	21	50	102	105	73
33	352	138	73	77	51	13
34	352	14	41	95	103	99

Note: All entries refer to total number of responses to that item of that value.

^a Items given in full in Appendix A.

THE USE OF HYPNOSIS IN MODIFYING IMMUNE SYSTEM RESPONSE

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There has been a growing literature in the field of psychoneuroimmunology over the past 25 years. This literature is examined for evidence of the effects of hypnosis on the immune system. It is concluded that there is solid evidence to suggest that psychological interventions can have a significant effect on physiological responses and disease processes and that individuals have the capacity to influence their immune systems by psychological interventions such as hypnosis. However, it is still unclear whether specific physiological substrates of hypnosis exist and by what pathways particular effects are produced in various bodily systems. Results of research have been difficult to compare because of a wide variety of independent, dependent, and moderating variables in the studies. More research is required to separate out the differential effects of variables such as hypnotisability, hypnosis, relaxation, and guided imagery. Further questions for clarification and a number of considerations of which to be mindful in future research are put forward.

HYPNOSIS AND THE IMMUNE SYSTEM

There is a body of literature on the use of hypnosis to modify immune system responses stretching back a number of decades and which provides one of the oldest bodies of research in this area. As early as 1963, experiments on the immediate and delayed-type hypersensitivity (DTH) skin response demonstrated the inhibition of both these responses by direct suggestion under hypnosis (Black, 1963; Black, Humphrey, & Niven, 1963). The delayed-type hypersensitivity response is a cell mediated response produced by injecting a small amount of antigen into the skin and noting the resulting weal sizes some

24–48 hours later. Research has continued along these lines up to recent times (Locke et al., 1994), as well as research investigating the effect of hypnosis on immediate skin response to histamines (Laidlaw, Booth, & Large, 1996; Laidlaw, Large, & Booth, 1997). In addition, many other indicators of changes in immune response to hypnotic interventions have been studied. Examples of the most common of these include T-cell counts (Kiecolt-Glaser et al., 1986); white blood cell counts (Bongartz, Lyncker, & Kossman, 1987); antibody production (Olness, Culbert, & Uden, 1989); B-cell, T-cell, helper, and suppressor cell concentrations (Ruzyla-Smith, Barabasz, Barabasz, & Warner, 1995); and natural killer cell activity (Gruzelier, Smith, Nagy, & Henderson (1997).

Hypnosis and Cancer

Over 20 years ago, there was evidence that human physiological responses controlled by the sympathetic and parasympathetic systems could be influenced in a directional way (Blacker, 1980; DiGuisto & Bond, 1979). Finkelstein and Howard (1982/1983) developed a cassette tape for cancer patients using a hypnotic procedure consisting of a relaxation induction, ego-strengthening, contra-cancer suggestions, and a deepening section. They reported that 100% of their subjects described benefiting from the relaxation, while 52.6% reported an improvement in physical health. With regard to the ego strengthening suggestions, 78.9% reported improvement in personal or interpersonal coping skills. Because of low numbers, it was not possible to determine whether these results were statistically significant, nor was there any evidence to link the reported benefits to immune system changes.

Gruber, Hall, Hersh, and Dubois's research (1988) showed significant elevations in the lymphocyte responsiveness to mitogens, interleukin-2 secretion, NK cell activity, and immunoglobulins following a "ritualised relaxation and guided imagery" procedure in patients with metastatic cancers. It is not clear whether this intervention constituted hypnosis, however, and there was no control group. More recently, a meta-analysis of randomised controlled studies of the effect of psychosocial interventions with adult cancer patients (Meyer & Mark, 1995) indicated an overall beneficial effect for psychosocial treatments, but no difference between treatments. Treatment regimes included cognitive behavioural therapy (CBT), psychotherapy, social support, education, and music therapy. The CBT category included a variety of procedures including progressive muscle relaxation and hypnosis; however, the analysis did

not allow for any direct investigation of the role of hypnosis specifically.

A number of experiments by Walker and colleagues (1991, 1992, 1993, 1996) have demonstrated the positive effect of psychosocial interventions, including hypnosis, with cancer patients. In a randomised, prospective, controlled study using patients experiencing nausea and vomiting as a result of chemotherapy, those randomised to the hypnotherapy group had significantly less anxiety at the final chemotherapy cycle and patients randomised to the relaxation therapy group had less late onset nausea (Walker, Lolley, Dawson, & Ratcliffe, 1991; Walker, 1992). Walker et al. (1996) have also reported on a prospective randomised study of the effects on the immune system of relaxation training and guided imagery (visualising host defences destroying cancer cells) in women with large cancers in the breast. Examination of their immunological status revealed that women assigned to relaxation and imagery had higher absolute numbers and higher percentages of activated T cells, lower levels of tumour necrosis factor alpha, and higher lymphokine killer cell cytotoxicity. Changes in natural killer cell cytotoxicity were correlated with self-rated imagery intensity and frequency of relaxation practice. Walker (1998) interprets these results to “indicate clearly that relaxation and guided imagery can enhance quality of life and modulate host defences” (p. 38).

Hypnosis and Skin Response

Skin reaction to administered histamines, antigens, or allergens can be regarded as a gauge of immunological hypersensitivity. As noted, changes in this reaction have been used to assess the effect of hypnosis in altering this response in both immediate and delayed-type responses (Laidlaw, Booth, & Large, 1996; Laidlaw, Large, & Booth, 1997; Zachariae, Bjerring, & Arendt-Neilsen, 1989; Zachariae & Bjerring, 1993). Zachariae et al. (1989) found a significant reduction in flare reaction to a histamine prick test in highly susceptible subjects following hypnotic suggestions to decrease their cutaneous reaction. Suggestions for increasing the reaction to tuberculin on one arm and decreasing it on the other also resulted in significant differences in both flare and induration responses. In the case of responses to allergens, Zachariae and Bjerring (1993) demonstrated significant differences between groups of highly susceptible subjects instructed to differentially increase or decrease their reactions to two different allergens. Laidlaw et al. (1996) studied the effect of a hypnotic procedure on skin reactions to histamine. Subjects were given a hypnotic induction, then a relaxation procedure followed by visualisation of a pleasant

day and permissive instructions to use the imagination to make their skin non-reactive. The size of the weals resulting from an injection of histamine was measured after a 10 minute interval. Results indicated that after subjects had received the hypnotic intervention, there was a significant decrease in the average size of weals compared to the control session in which no hypnotic instructions were given. The authors concluded that it is possible to decrease skin reactivity to histamine by using a cognitive-hypnotic type of intervention. However, the intervention was a mixture of a hypnotic induction, relaxation procedures, and permissive visualisation and the authors did not attempt to measure the individual effects of the various components. Some post-experimental questioning of subjects' imaginal strategies via a process, such as the experiential analysis technique (Sheehan & McConkey, 1996), may have assisted in determining the exact cognitive strategies used. Additionally, a design contrasting hypnosis, hypnosis plus suggestion, non-hypnosis, and non-hypnosis plus suggestion would have allowed a more specific investigation of the variables responsible for the effect. This study also investigated the relationship of hypnotisability as measured by the HGSHS:A and Creative Imagination Scale (CIS) (Wilson & Barber, 1978) to weal size and found no correlations with either measure. In a further study, Laidlaw et al. (1997) demonstrated that subjects were able to decrease their reactivity to an allergen, just as they were able to do with their histamine reaction. In that study, there was also no correlation of these results with level of hypnotisability.

In contrast, Locke et al. (1994) found that highly hypnotisable subjects were unable to alter their delayed-type hypersensitivity (DTH) responses using hypnotic suggestion. This study specifically investigated whether healthy subjects of high hypnotisability who had the ability to alter skin temperature under hypnosis could also influence the DTH response to an antigen under hypnotic suggestion. Subjects' hypnotisability was assessed using the Harvard Group Scale of Hypnotic Susceptibility, Form A. Only those scoring 10, 11, or 12 were selected. Subjects were tested for baseline responses to varicella-zoster (VZ) antigen, as well as their ability to alter peripheral skin temperature with hypnotic suggestions. No subjects had any training in hypnosis, although some had experienced stage hypnotism and had practised relaxation and yoga techniques. After being injected, the subjects were hypnotised using the eye-roll technique with suggestions for relaxation. No information is given about the specific suggestions which were given in the various experimental conditions. The dependent variable in this study was the diameter of the area of induration at 24 and 48 hours after injection. Results indicated that subjects

failed to alter the DTH response to VZ antigen through hypnotic suggestion.

Some differences between this and the Laidlaw study which may have affected the outcome included differences in antigen used, the timing of the hypnosis after the injection of antigen, and the time lapse for measures of the response. Another possible suggestion, made by the authors, for this outcome was the interesting idea that the design of comparing DTH responses in both arms may have facilitated subjects' efforts to produce an altered DTH response by permitting a left versus right discrimination. Evidence, cited by Gruzelier (1998), for the varying lateralisation activity generated in the brain by hypnosis may have some bearing on this result. It could be hypothesised that greater cortical activity, produced by hypnosis, in the right hemisphere may facilitate the ability to influence physiological responses on the left side of the body. This hypothesis should be able to be tested by measuring cortical activity and relating it to any differences in laterality of skin responses.

Hypnosis and Cellular/Humoral Immunity

In a review of early experiments relating to hypnosis and the immune system, Hall (1982/1983) examined a number of studies which had employed hypnosis as a psychological and cognitive means of influencing physiological reactions considered to be mediated by immune system responses. Studies included allergic responses such as asthma and skin reactivity to allergens (Mason & Black, 1958), dermatological conditions (Kaneko & Takaishi, 1963), inhibition of the Mantoux tuberculin reaction (Black et al., 1963) and cancer (Simonton, Matthews-Simonton, & Creighton, 1978). Hall concluded from his review that "hypnosis may potentially be able to alter immune responses in order to influence the underlying biochemical factors of physical diseases" (p. 101). However, he also identified a number of methodological problems in the reviewed studies. First, many were uncontrolled case studies and many lacked any assessment of hypnotisability. Hypnotisability has been linked to immune response in some studies (Hall, 1982/1983) but not in others. This issue will be examined in more detail later in the article.

Walker, Johnson, and Eremin (1993) reviewed a number of studies discussed below purporting to show that hypnosis and relaxation can modulate the immune response to stress. The influence of hypnosis on white blood cell counts was investigated by Bongartz et al. (1987). Healthy subjects assessed on the SHSS:C at 8 or above were assigned to one of three experimental conditions: hypnosis induced via eye fixation and relaxation images, viewing a

film about Mesmer, or doing mental arithmetic. No low-hypnotisable control group was included. They found reduced white blood cell counts in all conditions but a significantly greater reduction after hypnosis. They interpreted this as indicating hypnotically enhanced immunocompetence via a mechanism of decreased sympathetic nervous system arousal causing adherence of white blood cells to vessel walls. This interpretation is counter to that of later experiments in this area which have interpreted decreased levels and activity of lymphocytes in the blood to be a sign of suppression of immune function. As no control group was included, it is impossible to assess which particular variables may have accounted for this result.

Kiecolt-Glaser et al. (1986) randomly assigned medical students taking examinations to either a relaxation/hypnosis group or to a no-intervention control condition. In this study, the dependent variable was the immune cell activity (changes in the percentages of helper/inducer T cells and suppressor/cytotoxic T cells and helper/suppressor cell ratios) in blood assays taken during the stress of examination periods, in comparison to those in blood taken one month prior to examinations. Results indicated that immunosuppression was present in both experimental and control groups on the day of the examination with no significant differences. For those in the relaxation group, more frequent practice of relaxation produced higher T helper/inducer-cell percentages in the blood. This result was interpreted as evidence that relaxation may be able to enhance some aspects of cellular immunity and for central nervous system mediation of the immune system. However, the role that hypnosis per se played in this study is indeterminate, as there was no mention of any assessment of hypnotisability and it appears as though there was confounding among the hypnosis and other experimental conditions, as the experimental group was exposed to a mixture of self-hypnosis, progressive relaxation, autogenic training, and various imagery training. There was also no detail indicating in what manner hypnosis was induced, other than a statement that standard deepening exercises were used.

The quality of relaxation achieved (as expressed in ratings), via self-hypnosis, was found by Whitehouse et al. (1996) to be associated with increases in both the number of NK cells and NK cytotoxicity in medical students undergoing examinations. In this study, no significant differences between subjects in the self-hypnosis group and the no-treatment group were found on any of the measures of immunocompetence, nor were frequency of practice or hypnotisability significant predictors of immune function. Once again, little detail was provided as to the nature of the self-hypnosis exercises.

To counter some of the criticisms of their earlier study referred to above, Kiecolt-Glaser, Marucha, Atkinson, and Glaser (2001) conducted a further study with medical and dental students to assess the influence of an hypnotic intervention on cellular immune function during examinations. In this study, participants were selected on the basis of hypnotic susceptibility with only high susceptible subjects being selected. The researchers were interested in testing the hypothesis that the magnitude of the relationship would be related to both the frequency of practice of the intervention and hypnotic susceptibility. Results indicated that participants in the hypnotic group were protected from the stress-related decrements that were observed in the control group. More frequent practice was associated with higher percentages of T lymphocytes. No significant association between hypnotic susceptibility and changes in immune function was found, although no direct comparison was made between groups of high and low susceptible subjects. The authors interpreted these results to suggest that this hypnotic intervention may reduce the immunological dysregulation associated with acute stressors.

Evidence for the voluntary regulation of the immune system by psychological mechanisms was also provided by Hall, Minnes, and Olness (1993), who reviewed 22 studies that investigated the effects of various self-regulatory procedures on changes in cellular and humoral immune function in humans. The techniques ranged across relaxation/imagery with, or without, music, self-hypnosis, and biofeedback. Of these studies, 18 demonstrated positive changes on various immune measures following the self-regulation intervention. Hall, Minnes, Tosi, and Olness (1992) also examined the effects of prior training in relaxation/imagery on subjects' ability to alter immune activity. They found that, in contrast to control subjects with no training, experimental subjects who received prior relaxation/imagery training were able to positively influence their immune systems, as measured by significantly increased levels of neutrophil adherence. Neutrophil adherence accounts for the accumulation of lymphocytes at a wound site producing inflammation and is considered to be an indicator of increased immune reactivity. In an effort to determine whether immune changes, such as neutrophil adherence, were associated with cognitive activity or a relaxation response, Hall et al. (1993) also measured psychophysiological data (pulse rates and peripheral finger temperature) after administering a relaxation/imagery procedure. The procedure was described as "the induction of a hypnosis-like altered state and the manipulation of mental imagery" (p. 227). They found that experimental subjects given four sessions of prior training demonstrated an increase in neutrophil adherence

that was significantly different from the control group and that they did not demonstrate any significant changes on psychophysiological measures. The authors speculated from this result that the immune changes were associated with an active, cognitive process, as opposed to the result of a relaxation response. However, it is unclear whether the absence of changes in pulse rate and peripheral finger temperature constitute the absence of relaxation effects. Additionally there was no assessment of hypnotic susceptibility levels which may have provided information about subjects' imagery ability.

Further support for this interpretation was provided in a later study by Hall, Papas, Tosi, and Olness (1996). In this study, experimental groups used relaxation/mental imagery in an attempt to either increase or decrease neutrophil adherence in comparison to a resting control group. On this occasion, the relaxation/mental imagery exercise was described as "the induction of a hypnosis like state and the manipulation of the stickiness of neutrophils via mental imagery" (p. 187). One experimental group was instructed to attempt to increase their neutrophil adherence, whereas the other was to attempt to decrease it. Subjects were permitted to devise their own imaginal strategies. Results showed that, contrary to expectations, both experimental groups demonstrated significant decreases in neutrophil adherence, irrespective of whether they had been requested to increase or decrease neutrophil adherence. The resting control group showed a tendency for increases in neutrophil adherence. These results were in contrast to those previously reported in the study referred to above (Hall et al., 1993). The authors provided a rather speculative explanation for these results, suggesting that the active cognitive process of imagining produces a decrease in adherence, while simply resting produces an increase in adherence and that achieving a state of relaxation may be more important in producing neutrophil adherence than the intent of the imagery. It is difficult, however, to equate relaxation obtained through a simply resting control group with the more usual understanding of relaxation produced through specific muscle relaxation procedures. Other major problems in interpreting the results of the above studies lie in the difficulty of separating the effects of hypnosis and relaxation, the lack of information as to how hypnosis was induced, and the fact that subjects were allowed to construct their own imagery. Further assessment of subjects' imagery may have allowed some assessment as to what degree the procedure could be regarded as hypnosis.

The effects of relaxation therapy and hypnosis on the immune response of healthy volunteers to an experimental stressor (doctor-patient role-play), and

the relation of these effects to hypnotisability was investigated by Johnson, Walker, Whiting, Heys, and Eremin (1996). Hypnosis was induced using the Stanford Hypnotic Clinical Scale (SHCS) followed by test suggestions from the Creative Imagination Scale (CIS) (Wilson & Barber, 1978). Subjects in the experimental group practised relaxation for three weeks and then were hypnotised using the SHCS prior to exposure to a stressor. Results on the immunological measures showed no significant differences between groups; however, a number of significant within group differences were observed in both groups. Relaxation practice over three weeks produced a reduction in lymphocyte responsiveness and IL-1 secretion, suggesting a suppression of immune system responsiveness. However, experimental subjects showed increased lymphocyte responsiveness to a mitogen (PHA) after exposure to the stressor and a significant increase in IL-1 beta immediately after stressing and 24–48 hours later. These responses are indicative of enhanced immune function. In contrast, the control subjects demonstrated a reduced responsiveness at the same time points. A positive correlation was found between increased IgA levels and CIS scores for subjects in the relaxation group. Similarly, the changes in IL-1 levels pre and post exposure to the stressor were positively correlated with CIS scores in the experimental group. The authors have inferred a relationship between the psychoneuroimmunological response to relaxation and hypnotisability, as measured by the CIS. However it should be noted that the factor structure of the CIS suggests that it is more a measure of a subject's imagery capacity and vividness than of hypnotisability as measured by other standard scales of hypnotisability (McConkey, Sheehan, & White, 1979; Sheehan & McConkey, 1996). A possible confounding in this experiment was that all subjects were initially administered the SHCS and CIS, thus exposing all subjects to elements of the procedure to be used by the experimental subjects. Also there was no differentiation of high and low susceptible subjects. Furthermore, there was a confounding of hypnosis and relaxation procedures, as subjects in the experimental group were permitted to rehearse with either a progressive muscle relaxation procedure or relaxation produced by mental imagery thus allowing no conclusions to be drawn with regard to any differential effects of hypnosis, progressive muscle relaxation, and imagery vividness on immune response.

Gruzelier, Clow, Evans, Lazar, and Walker (1998) also studied the effects of hypnosis on immune response during exam stress, while controlling for the frequency of practice to overcome problems experienced earlier by Kiecolt-Glaser et al. (1986). Their experimental subjects were divided into high and

low susceptibles, while the control group was of mixed susceptibility, as measured on the Harvard Group Scale. The dependent variable was the quantity of various lymphocytes taken from blood plasma both before hypnosis and during exams. The hypnosis was induced by way of a standard eye fixation and relaxation procedure followed by guided imagery of increased immune function, ego-strengthening and feelings of happiness, and improved concentration and energy. The hypnosis consisted of one live session, followed by nine tape-recorded sessions practised at home. Significant differences were found between the self-hypnosis and control groups for levels of NK cell counts and T lymphocyte (CD8) counts with both being higher in the self-hypnosis groups. Once again, however, it is not clear which aspects of the intervention were responsible for the results. Although the number of practice sessions was controlled in this experiment, the results may also be reflecting repeated practice effects as in the Kiecolt-Glaser et al. (1986) study. All effects were also independent of hypnotic susceptibility. This result was explained as initial differences in susceptibility being overcome by the 10-session training program.

Further evidence for a change in cell mediated immunity after hypnosis was also shown by Fox et al. (1999) in a sample of patients with recurrent genital herpes simplex virus (rgHSV). For six weeks prior to being assayed, patients listened to a taped hypnosis session consisting of suggestions to increase mood and self-confidence and specific suggestions about boosting immunity and attacking infections. Results showed that hypnotherapy resulted in significantly reduced instances of recurrence of rgHSV and increases in the numbers of CD3 and CD8 lymphocytes in both improvers and non-improvers, suggesting a non-specific effect. In addition, only the improvers showed significant increases in natural killer cell counts and HSV specific lymphokine activated killer (LAK) cell activity. As NK cells can cause the death of HSV-infected cells this could be regarded as a specific immune enhancement effect. These results need to be interpreted cautiously, however, as this was a small pilot study with subjects acting as their own controls. Further confirmation by controlled clinical trials is required.

Other studies have examined the effect of relaxation/hypnosis on humoral immunity by assessing the production of salivary immunoglobulin A (IgA) following intervention. Janoski and Kugler (1987) randomly assigned subjects to three experimental groups: (a) progressive muscle relaxation and focused breathing; (b) progressive muscle relaxation, focused breathing, and imaging; and (c) a vigilance control task. Subjects were said to be "high in absorption

ability," but it is unclear how this was measured. Assay samples were collected before and after a one hour intervention. Results indicated that both relaxation groups had a higher level of salivary immunoglobulin A than control subjects. Similarly, Olness et al. (1989) found that only children who were given self-hypnosis using specific suggestions to increase salivary immunoglobulins did so. Salivary samples were collected at the beginning and end of the intervention session. In this study, there was no effect for hypnotisability as measured by the Stanford Children's Hypnotic Susceptibility Scales. This study suggested that imagery content was important in effecting immune changes.

The evidence from the above studies suggests that psychological interventions such as hypnosis, relaxation, and mental imagery can have an effect on various measures of immune function. However, observed effects are often in contrary directions, making firm conclusions difficult. For example, it has been demonstrated that a procedure producing significant relaxation effects restricted environmental stimulation therapy (REST), did not produce as high a level of immunoenhancement as did hypnosis (Ruzyla-Smith et al., 1995). In contrast, a previous study by Barabasz (1990) found that treatment with REST elicited spontaneous hypnosis. These conflicting results underscore the difficulties in teasing out the salient variables in hypnosis research in this area.

There are also a number of methodological issues arising from the above studies which deny direct comparisons and raise many questions for future research. Walker et al. (1993) identified a number of areas for consideration. First, it is difficult to determine which dependent variables should be studied. The immune response is a very complex process and it is impossible to measure all aspects at once. The above studies have variously examined percentages/ratios of white blood cells in the peripheral blood, the concentration/activity of particular subsets of lymphocytes (e.g., T cells, B cells, NK cells), the production of immunoglobulin and cytokines such as Interleukin-2, and immediate and delayed skin sensitivity to allergens. Olness (1999) has observed that there are only about 5% of polymorphonuclear white cells in the peripheral circulation at any one time, so that changes in immune system response are being measured in only a small percentage of circulating lymphocytes, leaving open to question the functioning of the remainder. This measure may therefore not be an accurate representation of what changes are occurring in the whole organism. The majority of white cells are likely to be associated with the lymph glands and spleen and the functioning of these cells may be quite different from those in the peripheral circulation. Second, it is

difficult to determine which independent variables (e.g., hypnosis, relaxation with and without hypnosis, imagery) are responsible for the effects. All of the above studies have employed varying degrees and combinations of the above variables, making it difficult to assess the specific effect of individual components of the interventions. When similar strategies were employed, the content of the interventions (e.g., relaxation procedure, type of hypnotic induction, imagery content) was very rarely similar. Third, the effects of moderator variables such as hypnotisability, amount of relaxation practice, and age have shown inconsistent results.

In an attempt to draw some of these results together, Miller and Cohen (2001) conducted an extensive meta-analysis of these research findings, including many of the studies referred to in this article, to investigate whether psychological interventions such as those described above can reliably modulate immune system parameters. Their intent was to examine the effect of background characteristics such as exposure to recent stressful events and level of hypnotic susceptibility and whether there is evidence for a dose-response relationship (as may be applicable to hypnotic interventions) between various psychological interventions and immune response. Although only modest evidence was found to support such psychological interventions as modulating immune function, the most consistent evidence emerged from hypnosis and interventions involving conditioning responses.

Further research in this area is required to try to differentiate the separate effects of these variables to assist in understanding their effects on the immune system more clearly. Future studies need to pay attention to the possible differential effects of hypnosis, relaxation, and imagery. To do this, precise definitions of each will be required with specific operational procedures delineated to enable replication. Various combinations of experimental groups for comparison are possible and include hypnosis with and without imagery, hypnosis with and without relaxation, imagery with and without relaxation, and relaxation alone.

HYPNOTISABILITY AND IMMUNE RESPONSE

The role that hypnotisability plays as a mediating variable in determining the effect of hypnosis on immune response has only recently begun to be considered. If it is to be demonstrated that hypnosis has specific effects on the regulation of the immune system, then it may be important to examine whether the subject's level of hypnotisability is related to the degree of effect

obtained. Research in this area has produced mixed results, with some studies demonstrating a positive correlation and others no correlation with hypnotisability.

Positive correlations have been found in a number of studies using various different measures of hypnotisability and immune system function. Zachariae et al. (1994) demonstrated that high hypnotisable subjects showed greater decreases in lymphocyte proliferative response and NK cell activity than low hypnotisables, when exposed to either guided imagery or relaxation. Ruzyla-Smith et al. (1995) also demonstrated an effect for hypnotisability. Highly hypnotisable subjects (SHSS:C) showed significantly greater T-cell counts after exposure to hypnosis in comparison to high hypnotisable subjects receiving restricted environmental stimulation therapy (REST). Johnson et al. (1996) found that increases in salivary IgA following three weeks of relaxation therapy were correlated with scores on the Creative Imagination Scale (CIS), as were immediate changes in IL-1 following exposure to a stressor. The authors concluded that “hypnotisability as assessed by the CIS may be an important moderator of the psychoneuroimmunological response to relaxation training and exposure to an acute stressor” (p. 107). However, as noted previously, the factor structure of the CIS aligns more closely with imagery ability than with hypnotisability (McConkey, Sheehan, & White, 1979).

Using a canonical correlation procedure, Hall, Mumma, Longo, and Dixon (1992) found a multivariate effect for age, hypnotisability (as assessed with the SHSS:C), and their interaction as a significant predictor of a positive change on a set of blood count measures (white blood cell and lymphocyte populations), but not on a set of mitogen measures following a “hypnosis-like relaxation/imagery exercise.” Age, hypnotisability, and their interaction as single predictor variables were not significant.

Other studies, however, have failed to demonstrate a correlation between hypnotisability and immune system changes following hypnosis. Olness et al. (1989) found no correlation with hypnotic susceptibility scores, as measured with the Stanford Children’s Hypnotic Susceptibility Scale, and the ability to produce changes in immunoglobulin levels in children. In a review of 22 studies examining voluntary immunomodulation with the use of self-regulatory procedures (relaxation/imagery with or without music, self-hypnosis, and/or biofeedback) Hall et al. (1993) reported that hypnotic ability was not, in and of itself, associated with success or failure in the outcome of the studies. Locke et al. (1994) found that highly hypnotisable subjects were unable to alter their DTH response using hypnotic suggestion.

In a study examining the effect of a relaxation/imagery intervention on neutrophil adherence (a marker of neutrophil activation) Hall, Papas, Tosi, and Olness (1996) found no relationship to hypnotisability as measured by the Pennsylvania State Scale of Hypnotisability: Form D of either increases or decreases in adherence. Laidlaw et al. (1996) and Laidlaw et al. (1997) provided further evidence for a lack of association of immune changes with hypnotisability. In the former study hypnotisability was measured with the HGSHS:A and CIS. Scores on either test were not correlated with subjects' ability to decrease their skin reactivity to histamine. In the second study, hypnotisability as measured by the HGSHS:A was not correlated with subjects' ability to decrease weal size in response to common allergens. Similarly, Gruzelier et al. (1998) found that changes in lymphocyte levels following a hypnotic procedure to ameliorate exam stress were not correlated with hypnotisability.

The results of these studies suggest that there is no conclusive evidence to demonstrate a correlation between hypnotisability and immune system response following a hypnotic intervention. Direct comparison between studies is difficult, however, due to the use of differing measures of hypnotisability, varying modes of hypnotic interventions, and diverse measures of immune system response. At this point, further research is required to establish a link between hypnotisability and immune system response and whether these responses are attainable by individuals irrespective of the induction of hypnosis. Studies are required comparing subjects of high, medium, and low hypnotisability, measuring immune response both with and without hypnosis administered in a standard protocol. Ideally a design enabling the partialling out of effects due to relaxation or imagery would be useful.

SUMMARY AND FURTHER CONSIDERATIONS

This article has reviewed the evidence for the direct influence of hypnosis on immune system responses by considering its effect on immune system mediated diseases such as cancer and HIV, skin sensitivity to allergens, and direct measurement of changes in the levels and activity of blood lymphocytes. The research examining the role of hypnotisability as a mediating variable in determining the effect of hypnosis on the immune system was also analysed. Overall, it has been found that psychological interventions such as hypnosis, relaxation, and mental imagery can affect immune system responses, although the observed effects have often been in contrary directions. A number of

methodological issues relating to these studies have made direct comparison of results difficult. The outcome of studies on the relationship of hypnotisability to the capacity to produce immune system changes with hypnosis has also been inconclusive.

A consideration of the foregoing research from the perspective of psychoneuroimmunology would imply that individuals have the capacity to either enhance or suppress aspects of their immune system through psychological interventions such as hypnosis. It is still unclear which particular aspects of the hypnotic phenomenon may account for these effects and whether the effects are of sufficient magnitude and durability to influence long-term health status. Further research is required to separate out the variables that are most likely to mediate treatment effectiveness.

In attempting to determine the effects of hypnosis on immune system responsiveness, research would need to be carefully designed to take in the following considerations: the assessment of hypnotisability and the inclusion of high, medium, and low subjects; adequate controls for evaluating responses to hypnosis, relaxation, imagery, and placebo effects; matched no-treatment control groups; pre- and post-intervention measurement of specific immune system parameters; timing of blood assays to lessen effects of fluctuations in levels due to time of day; medium and long term follow up to assess for continuing or sustained improvements, and selection of appropriate immune system dependent variables depending on the context of the study.

Further research is now required to investigate the underlying neurophysiological processes that may be responsible for observed changes in immune system response. Up to this point, the research has tended to follow either a neurophysiology path or an immunomodulatory path. The time has come to attempt to combine these two approaches in integrated designs to investigate the effects of hypnosis on neurophysiological changes in relation to immune responses as a preliminary step in understanding the possible mechanisms involved.

If hypnosis is responsible for producing observable neurophysiological changes in the brain, as seems to be the case, and for producing measurable alteration in immune response, as has also been demonstrated, then given sufficiently detailed knowledge, it should be possible to predict one from the other, if there is a truly reciprocal interchange of biochemical information between the cells of the brain and immune system. Hypnosis with suggestions for enhanced immune system response, time linked with simultaneous measurement of cortical activity and immune system parameters, may allow

some connections to be drawn. From the results of regional cerebral blood flow and EEG studies, it would be expected to observe in highly hypnotisable subjects, increased 40 Hz EEG coherence, and increased cerebral blood flow in the anterior cortices, possibly biased towards the left side, indicating focused attentional control. Blood assays drawn at regular intervals to allow time for responses to occur could then be investigated for the specific responses to suggestion. A major advancement in understanding the relationship of hypnosis to immune system responses could be achieved by establishing if there is a mechanism for determining whether changes in the level of immune related peptides in the bloodstream are associated with hypnotically induced changes in cerebral blood flow and other cortical changes. Perhaps this could be investigated by the use of DNA chip methodology as suggested by Rossi (2000), and modern imaging technologies such as PET and MRI. A necessary part of the experimental design would be to investigate the differential effects of suggestion with, and without, hypnosis and of relaxation and guided imagery. Consideration would also need to be given to order and carry over effects.

Lynn, Kirsch, Barabasz, Cardena, and Patterson (2000) have suggested several further design considerations for future clinical research in hypnosis. These include ensuring that the number of participants is adequate; conducting single or multiple case experiments; comparing non hypnotic treatments with hypnotic inductions and suggestions added; and conducting adequate follow-ups. They further suggest that attention be paid to the assessment of hypnotic suggestibility, expectancies, motivation, therapist/patient alliance, and other factors that may add to or detract from treatment effects (e.g., pathological conditions, personality characteristics, or dissociative ability). This position is strongly endorsed by the current review.

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SOME EFFECTS OF HYPNOSIS ON NEGATIVE AFFECT AND IMMUNE SYSTEM RESPONSE

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Research by Kiecolt-Glaser, McGuire, Robles, and Glaser (2002) concluded that immune systems can be influenced by psychological interventions such as hypnosis. This study investigated hypnotic capacity and the differential effects of hypnosis using techniques of progressive muscle relaxation, guided imagery, and deep trance on negative affect measured as burnout, depression, anxiety, stress, and immunocompetence. Sixty volunteers, aged from 17 to 63 years, were randomly assigned to either a control group or one of three hypnotic intervention groups. Participants were tested for their attitudes, expectancies, and hypnotisability. They completed self-report questionnaires and provided samples of saliva IgA, pre and post interventions. Results indicated that deep trance does significantly reduce negative emotional affect and improves immunocompetence. Positive expectancy was also found to be predictive of successful outcomes. Those subjects who chose to use the tape-recorded interventions more frequently benefited the most in reducing their negative affect scores and increasing their sIgA measures.

Mind-body healing research has assisted in demystifying complementary therapies that optimise wellbeing and healthcare. In recent years, the field of psychoneuroimmunology (PNI) has witnessed substantial progress in understanding the interrelationships which exist between the mind and its ability to effect changes in the body. Data from a number of studies, including Ader, Felton, and Cohen's (1991), have shown that various stressors can adversely affect immune function. Further, the possibility of a reciprocal relationship between the enhancement of immune function through

psychological interventions has generated considerable interest.

Several PNI intervention studies have used a number of diverse strategies to moderate the immune function link, including visualisation and hypnosis, relaxation, exercise, classical conditioning, self-disclosure, exposure to a phobic stressor to enhance perceived coping self-efficacy, and cognitive behavioural therapies (Kiecolt-Glaser & Glaser 1992). These interventions have generally produced positive changes (Kiecolt-Glaser & Glaser, 1992). However, there remains little evidence to suggest what type of intervention is optimal for which illness.

Recent medical research has also highlighted a spectrum of diseases whose onset and course may be influenced by proinflammatory cytokines, which can be produced by negative emotions and stressful experiences, and indirectly stimulated by chronic or recurring infections (Kiecolt-Glaser, McGuire, Robles, & Glaser, 2002). Accordingly, distress-related immune dysregulation, or immunosuppression, may be a core mechanism behind a diverse set of health risks associated with negative emotions. One conceptualisation of negative emotions is the construct of “burnout,” which is a prolonged response to emotional and interpersonal stress (Maslach, Schaufeli, & Leiter, 2000). Mearns and Cain (2003) report that environmental conditions, contextual variables, negative mood regulation, and coping behaviour are also associated with burnout dimensions.

Immunocompetence

Research has highlighted the relationship between immunity, immunocompetence, and stress (O’Leary, 1990). Rice (1999) defines immunocompetence as the degree to which the immune system is active and effective. Clinical evidence has demonstrated that stress can suppress the immune system, limiting the system’s effectiveness in identifying and destroying antigens (Glaser & Kiecolt-Glaser, 1994). It may be argued that if stress and poor coping skills are related to immunosuppression, then learning more effective coping abilities and reducing stress may lead to immunological enhancement. However, few studies have assessed the benefits of psychological interventions, particularly with healthy individuals facing stressful life events that threaten immunity.

Psychological processes using relaxation and hypnosis, therefore, may have the potential to play a far more important and positive role in helping individuals develop the capacity to ameliorate immunosuppression and

significantly enhance their immunocompetence. During immunosuppression, the feedback loop of psychological processes and immunity processes can become suppressed over an extended period of time due to stressful conditions, situations, negative events, lifestyles, conditioning, and other psychosocial factors (Rice, 1999).

As the brain serves as the control centre to maintain balance in immune system response, it provides an important mediator for psychological interventions (Caltabiano, Byrne, Martin, & Sarafino, 2002). However, as Dantzer and Kelley (1989) have pointed out, the influence of stressors as a suppressor or facilitator of immune reactivity depends upon the nature, duration, and frequency of the stressor events which affect immunocompetence.

Stress and Immunity

Stress is another important complex system of interactions that links the central nervous system and immunity. There is evidence from animal and human studies demonstrating the downward modulation of immune function concomitant with a variety of stressors (Ader et al., 1991; Kiecolt-Glaser & Glaser, 1992). The data highlight that something as transient and relatively benign as academic stress (e.g., exams) modulates a wide range of immunological activities (Glaser et al., 1987).

Other studies have addressed the question of whether longer term adaptation occurs when a stressor is more chronic, (Kiecolt-Glaser, Dura, Speicher, Trask, & Glaser, 1991; McKinnon, Weisse, Reynolds, Bowles, & Baum, 1989). However, the evidence from these and other studies suggests that chronic stressors are associated with continued suppression of the immune function rather than adaptation.

A meta-analysis by Miller and Cohen (2001) concluded that psychological interventions were shown to modulate certain features of the immune response. The meta-analysis yielded no support for the claim that psychological interventions can induce beneficial immune changes in medical populations (Bock & Sabin, 1997; Epstein, 1989; Levine, 1991). However, there is little research into psychological interventions and their effects on immunocompetence in healthy participants.

In combination, these studies suggest that stress has an adverse effect on immune responses and that psychological interventions may enhance biological indicators such as a reduction in stress, hormone levels, and an increase in immune responses.

Psychological Interventions

Psychological interventions are designed to improve psychological and/or physical wellbeing through the modification of emotion, cognition, or behaviour. Broad classes of intervention such as relaxation, visualisation, and hypnosis have been shown to mediate the major behavioural and biological pathways which influence the immune system response (Miller & Cohen, 2001).

For those individuals coping with their perceived level of stress, experiencing little negative affect, and demonstrating healthy behaviours, it would be expected that their immune systems would be functioning satisfactorily. Furthermore, it may not be possible to enhance satisfactory immune function above normal levels due to homeostatic regulation, and it would not be desirable to do so, as an overactive immune system may lead to an autoimmune disease (Keicolt-Glaser & Glaser, 1992). For those individuals not coping with stressful life experiences and whose immune systems are suppressed, psychological interventions such as relaxation training have been shown to influence health outcomes (Herbert & Cohen, 1993).

Hypnosis and relaxation have been the most commonly used interventions in PNI studies (Keicolt-Glaser & Glaser, 1992). The use of hypnosis in the mediation of immune system response is of particular interest in this present study, as visual imagery and positive expectancy are also known to influence the potency of the immune response (Miller & Cohen 2001).

Hypnotherapy

Relaxation and hypnosis can be of differing degrees, intensity, and efficacy. Havens and Walters (1989) have proposed a three-level model of hypnotherapy based on a criterion of levels of therapist directives. The first level suggests that hypnotherapy may be accomplished solely by the elicitation of a relaxed trance state (mind-body communication), usually in the form of progressive muscle relaxation (PMR).

Havens and Walter (1989) assert that level-two hypnosis comprises a gentle problem-solving focus using specific metaphors to stimulate a present problem, then further directs the client's unconscious mind to utilise their own initiative and resources towards new skills, conclusions, and solutions. This level is generally understood as PMR *and* guided imagery (GI). The approach at this second level is indirect and permissive and may target brain-body communication and neuroendocrinal transduction. Standardised suggestions

delivered to the client after a relaxing hypnotic induction are designed to eliminate tension, anxiety, and fear and to gradually restore the person's self-confidence in their ability to confront and resolve their own problems, thus reducing negative affect.

Some individuals may further require a more direct approach, which is combined in level three, with straightforward, specific, therapeutic instructions used in the deep trance (DT) state for self-healing and ego strengthening, targeting information at the cellular level feeding back to the entire body (Stanton, 1993). Level three comprises PMR, GI, and DT, using specific mind-body healing language targeted at boosting the immune system response (Battino, 2000; Hunter, 1994).

While a hypnotic trance is not therapeutic in, or of, itself, specific suggestions and images supplied to the client in trance can profoundly alter thinking patterns and behaviour, laying the groundwork for powerful change (Barrett, 2001). Further, in addition to different levels of hypnosis, another variable which may affect the quality of the intervention could be the participant's hypnotisability.

Hypnotisability and Susceptibility

Many researchers have proposed that only people who are highly susceptible to hypnosis can benefit from a hypnotic component of treatment (Schoenberger, 2000). However, empirical evaluations of hypnotisability and treatment outcome are limited and have produced conflicting findings. Some studies have demonstrated a positive correlation and others none. Studies by Zachariae et al. (1994) demonstrated that participants with high hypnotic susceptibility showed greater decreases in lymphocyte proliferation response and NK cell activity than participants with a low hypnotic capacity when inducted to either guided imagery or relaxation trances.

Other studies, however, have failed to demonstrate a correlation between hypnotisability and immune system changes following hypnosis. In a review of 22 studies examining voluntary immunomodulation with the use of self-regulatory procedures (relaxation/imagery with or without music, self-hypnosis, and/or biofeedback), Hall, Minnes, and Olness (1993) reported hypnotic ability was not in and of itself associated with success or failure in the outcome of the studies. Besides hypnotisability and suggestibility influencing the efficacy of a hypnotic intervention, the role of the participants' attitudes and expectancies associated with hypnosis or a hypnotic intervention may also play a part in determining the efficacy of a hypnotic intervention.

Attitudes and Expectancies

Participants' attitudes and expectancies regarding hypnosis and hypnotherapy are very important in the evaluation of hypnotic treatments, although they have been assessed much less frequently than hypnotisability in research studies. Expectancy of positive therapeutic outcome is often predictive of improvement of treatment (Kirsch, 1990). It is therefore reasonable to assume that people with positive attitudes toward hypnosis would be more cooperative and therefore more likely to respond successfully to treatment as measured by frequency of intervention and positive outcome.

Overview and Rationale for Current Study

The current evidence suggests that there are differential effects of attention, relaxation, and level of trance that may interact with the client's levels of susceptibility, their attitudes, and expectations of trance. These factors may in turn affect the outcomes of the trance and the hypnotic process (Gruzeliier, 2000). Further, from the previous reviews of research literature, there is support for the proposal that psychological interventions such as relaxation, visualisation, and hypnosis mediate the biobehavioural model of stress and disease outcome.

As psychosocial factors such as hypnotic capacity, attitude, and expectancy may also impact on the biobehavioural model of stress/disease outcome, distress-reducing interventions have been associated with improvements in some aspects of immune function in healthy adults (Penebaker, Kiecolt-Glaser, & Glaser, 1988). However, it is unclear what components of the trance experience have the greatest impact on positive health outcome and immune system response, especially for healthy participants.

Thus, the aim of the present study was to investigate the differential effects of hypnosis – relaxation, guided imagery, and deep trance – on negative affect and the immune system response. Based on the three-level model of therapist directiveness, relaxation in trance targets the physical mind-body communication, guided imagery targets the brain-body connection, and deep trance targets the cell-gene feedback loop specifically designed to communicate with the immune system response.

From the review of recent research literature, the following hypotheses were proposed. Hypothesis one proposed that higher hypnotisability will result in greater levels of immune system response change, as higher hypnotic capacity would correlate with greater openness to suggestion.

Hypothesis two proposed that the light trance group using PMR would demonstrate reduced negative emotional affect (measured as burnout, depression, anxiety, and stress) and enhanced immunocompetence (measured by an increase in sIgA) compared to the control group measures.

Hypothesis three proposed that the second trance group (GI), combining PMR and GI, would further demonstrate a reduction in negative affect and increase in immunocompetence.

Hypothesis four proposed that the third group – deep trance (DT), including PMR, GI, and DT with specific language targeting mind-body healing as suggested by Hammond (1990) – would demonstrate that the more specific the hypnotic suggestion, the greater the likelihood of positive effect. It was hypothesised then, that the DT group would demonstrate a further reduction in negative emotional affect and increase in immunocompetence.

Finally, the fifth hypothesis proposed that the greater number of times the intervention was voluntarily used by the subject would indicate their positive expectancy of their treatment. It was therefore further hypothesised that the greater the frequency of intervention, the greater the expectation of positive outcome measures.

METHOD

Participants

A total of 60 healthy participants volunteered to participate in the study. Participants volunteered from local fitness and health centres in response to community posters seeking volunteers for research in hypnosis, stress, and immunity. The sample consisted of 14 males and 46 females. Ages ranged from 17 to 63 years with a mean of 41.5 years. Participation was anonymous, and no monetary incentive was offered.

Measures

Stanford Hypnotic Clinical Scale for Adults (SHCS-A) The Stanford Hypnotic Clinical Scale for Adults (SHCS-A) by Morgan and Hilgard (1975) was used to provide an estimate of hypnotic capacity/hypnotisability. The test uses observation of an individual's trance phenomena and assesses trance depth using standardised tests of hypnotisability with rating scales.

Burnout Assessment Test In order to assess the individual's level of burnout in this study, a 25-item self-report test was administered, pre and post intervention, using the Burnout Assessment Test (BAT) by Maslach et al. (2000). This test

monitors health behaviour, symptomatology, and negative affect, contributing to an individual score. The BAT was specifically chosen because of its application and relevance to a seemingly healthy population and its adequate validity and reliability.

Depression Anxiety Stress Scales (DASS) The DASS is a set of three self-report scales designed to measure the negative emotional states of depression, anxiety, and stress (Lovibond & Lovibond, 1995). The 42-item self-report instrument was designed in Australia to further the process of defining, understanding, and measuring these clinically significant states. The DASS manual asserts that the test should meet the requirements of both researchers and clinicians because of its robust validity and high reliability (Clark & Watson 1990).

Studies by Brown, Chorpita, Korotitsch, and Barlow (1997) and Clark and Watson (1990) report that the DASS has shown excellent internal consistency, temporal stability, and discriminant validity.

Saliva Immunoglobulin A (sIgA) PNI studies have suggested the usefulness of secretory (saliva) immunoglobulin A (sIgA) concentration measurement as an indicator of prolonged stress and humoral immune system response (Kiecolt-Glaser, Garner, Speicher, Penn, & Glaser, 1984). This method of measuring the functioning of the immune system is relatively non-invasive. While a valid measure, it is not as accurate and sensitive a predictor as the invasive blood test. Each participant's report was mailed to the researcher and a normal reading of between 30 and 150mg/L of IgA was expected.

Procedure

Prospective participants were screened for contraindications to hypnosis using the 11-item Education About Hypnosis Questionnaire and the pamphlet *What is Hypnosis Anyway?* as well as a clinical interview to screen for any clinical contraindications. Each session took about 1.5 hours. Once a comfortable therapeutic relationship was established, each suitably assessed participant was then educated about hypnosis and tested for hypnotisability (SHCS-A), burnout, depression, anxiety, and stress using the BAT and the DASS.

After the pre-test session participants made an appointment for future treatment and were randomly allocated to a treatment group. Prior to the intervention each subject provided a saliva sample. The participant produced an unstimulated saliva sample by "sucking in their mouth," which had been

previously moistened with a drink of water. Queensland Medical Laboratory (QML) provided the labelled and sterilised specimen jars for the saliva samples. The sample was then immediately frozen and later batched and taken to QML.

The participants were hypnotised according to the standardised script for that particular group and the intervention for each session was also recorded on audiotape. Participants were asked to continue listening to the recorded intervention for three to four weeks, and to record their frequency of use on a score sheet provided.

On average, three to five participants were seen per day and sessions were of approximately one hour's duration. Each participant's expectancy in relation to the hypnosis was recorded. After the intervention an appointment time was then arranged for the follow-up session, and the intervention and re-testing was repeated. Scores and results were therapeutically discussed and debriefing was conducted following the final hypnosis session.

Interventions

Based on the three-level model of therapist directiveness, light trance induction using progressive muscle relaxation (PMR) forms the experimental basis for level one (Hammond, 1990). This was augmented by guided imagery (GI) metaphorically targeting reducing negative affect for level-two hypnosis (McCarthy, 2001). Level three further comprised deep trance (DT), using specific mind-body healing language which targeted the boosting of the immune system response (Battino, 2000; Hunter, 1994).

Research Design

The research design for this study was an experimental design, with randomised selection of equal sized experimental groups.

This study investigated the independent variables of the differential effects of levels of trance, participant's expectancies, and participant's hypnotisability, on the dependent variables of stress, depression, anxiety and burnout, and immunocompetency. To evaluate the effects of the interventions, a multiple base-line design across situations was established in this single-case experimental study as described in Table 1.

Table 1: Groups, Interventions, and Time Frames of Study

Healthy volunteers	→ Pre-test interview	→ Random allocation	→ Interventions 1 week	→ 3 weeks tape playing	→ Post-test 1 week
(60)	sIgA sample		(15) PMR (15) PMR+GI (15) PMR+GI+DT (15) Control, no intervention	no tape	sIgA sample Post-test + PMR+GI +tape

RESULTS

After the presentation of descriptive statistics including the means and standard deviations for the dependent variables, the specific hypotheses examining the effects of the three hypnosis interventions were tested using a one-way analysis of variance (ANOVA) between groups and within groups. Correlations were then used to measure the associations between the variables. Multiple regression analyses were also conducted to ascertain the predictive power of each independent variable of hypnotisability and frequency of intervention (indicating positive expectancy) upon the dependent variables of the changes in immune system response (sIgA), and negative affect outcomes (burnout and DASS scores). All variables satisfied the assumptions of multivariate analysis, normality, linearity, and homoscedasticity (Tabachnick & Fidell, 1996).

Descriptive Statistics

Table 2 shows the number of participants in each group and their changes in negative affect scores and the pre- and post-test scores for the salivary IgA (sIgA).

Of interest from Table 2 is the increase in burnout, depression, anxiety, and stress in the control group compared to the decrease in these dependent variables in each of the other treatment groups. The measure of immunocompetence, sIgA, showed an improvement for all groups. However, there were large standard deviations for this measure. In order to test whether these observed differences were statistically significant, further analyses were conducted.

Table 2: Changes in Means and Standard Deviations of Dependent Variables Including Saliva IgA For Groups^a

Group (<i>n</i>)	Variable											
	Burnout		Depression		Anxiety		Stress		IgA		slgA	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Control (15)	-80	(4.87)	-1.46	(4.56)	-2.40	(2.64)	-.13	(3.73)	Pre 105.32	(57.60)	Post 125.80	(69.81)
	5.53	(4.61)	1.93	(4.31)	3.75	(4.39)	6.06	(6.80)	Pre 107	(65.02)	Post 121.67	(55.22)
PMR (15)	8.80	(7.26)	4.26	(5.49)	4.86	(5.46)	7.73	(6.58)	Pre 104.73	(58.17)	Post 134.33	(77.7)
	8.10	(6.09)	5.60	(6.10)	4.80	(7.20)	5.06	(8.24)	Pre 89.80	(46.18)	Post 134.60	(69.47)

^a Positive change indicates less burnout, depression, anxiety, and stress.

Statistical Analyses

Initial checks to see if there were differences between the four groups on the four dependent variables were conducted by way of ANOVA. Significant differences were found between groups for change in burnout ($F(3, 14) 8.46, p > 0.001$); change in depression ($F(3, 14) 5.13, p > 0.003$); change in anxiety ($F(3, 14) 6.62, p > 0.001$); change in stress ($F(3, 14) 4.02, p > 0.01$). This indicated that each group differed on the scores recorded for each of the constructs of negative effect and were therefore examined further with regards to the specific hypotheses.

Hypothesis one, that higher hypnotisability would result in greater levels of immune response, was tested. A correlation between scores on the hypnotisability for the three experimental groups and changes in scores on the sIgA indicated that there was no significant correlation ($r = -.04$) and hypothesis one was therefore rejected.

Hypothesis two, which proposed that PMR would reduce burnout, depression, anxiety, and stress, and thereby possibly increase immunity, was tested by way of ANOVA. Post hoc tests indicated that there were significant differences in changes in burnout and anxiety between the control group and the PMR group. There were no significant changes in the scores for depression and stress. A paired sample t test was then computed to ascertain if these changes in burnout and anxiety increased immunity scores on the sIgA. No significant differences were recorded between the means of the initial sIgA measure and the post-intervention sIgA. Therefore hypothesis two was only partially supported, as there were only significant changes for burnout and anxiety.

Hypothesis three, that proposed the GI group would reduce burnout, depression, anxiety, and stress, and therefore increase immunity, was also tested by way of ANOVA. Post hoc tests indicated that there were significant differences ($p < .05$), in changes in burnout, anxiety, depression, and stress. The GI group therefore showed significant changes on all the negative affect variables. A paired sample t test was then computed to ascertain if these changes in negative affect also increased immunity scores on the sIgA. No significant differences were recorded between the means of the initial sIgA measure and the post-intervention sIgA. Despite there being significant changes recorded for all the negative affect scores using the GI intervention, hypothesis three was only partially supported, as no significant change was reported for Immunity.

Hypotheses four – that deep trance would reduce burnout, depression, anxiety, and stress, and therefore possibly increase immunity – was analysed by post hoc ANOVA. These tests indicated that there were significant differences in changes in burnout, anxiety, and depression between the control group and the DT group. There were no significant differences between the control group and the DT group in relation to stress scores. A paired sample *t* test was then computed to ascertain if these changes in negative affect also increased immunity scores on the sIgA. There was a significant difference recorded between the pre-sIgA and the post-sIgA ($t(13) = -3.097, p < 0.008$). Aside from the non-significant difference on changes within stress scores, hypothesis four was partially supported with significant differences recorded for burnout, depression, and anxiety, and also a significant change in levels of immunity using the deep trance intervention.

Hypothesis five proposed that there would be a significant relationship between high scores on changes in the negative affect scales and frequency of intervention. Correlations with these variables indicated that there was a small, but significant, positive correlation between frequency of intervention and changes in depression ($r = .307, p > .05$) and changes in stress ($r = .320, p \leq .05$). A higher correlation was discovered for frequency of intervention and changes in burnout ($r = .381, p \leq .01$). No significant results were discovered for frequency of intervention and anxiety. Hypothesis five was therefore partially supported, as frequency of intervention had a positive effect on changes in depression, stress, and burnout.

DISCUSSION

The aim of this study was to investigate the differential effects of hypnosis contributing towards enhancing immunocompetence and reducing negative affect based on the body of evidence of psychoneuroimmunology intervention studies (Kiecolt-Glaser et al., 2002; Miller & Cohen, 2001). While findings were mixed for the different hypnosis interventions, results indicated that deep trance does significantly reduce negative emotional affect and improve immunocompetence. The first hypothesis proposed that higher hypnotisability would result in greater positive immunological change. This was based on the assumption that higher hypnotic capacity would correlate with greater openness to suggestion, as many researchers have proposed that only people who are highly susceptible to hypnosis can benefit from a hypnotic component of treatment (Schoenberger, 2000). Hypnotic capacity, as measured by the

Stanford Hypnotisability Scale (SHCS-A) in this study, did not indicate a significant relationship with changes in sIgA immunity. The SHCS-A measures an objective response to suggestion and does not account for subject variables such as rapport and expectancy effect. It was noted that some participants who initially indicated zero to low-level hypnotic capacity on the SHCS-A, but expected a positive outcome from the study, were later observed to achieve trance depth in the intervention groups.

As the SHCS-A only uses a direct induction technique to facilitate trance and measure response, it should be remembered that there are infinite ways of inducing hypnotic experience (Battino, 2000). The Stanford scale does not take into account these interacting subject variables accounting for individual differences in expectancy and permissive style. These variables may have contributed to measurement error of hypnotic suggestibility in this study, and hence the rejection of hypothesis one correlating hypnotisability and immune system response.

Congruent with the results from other previous studies, it was expected for hypothesis two, that the PMR intervention would reduce negative affect and increase immunity (Plotnikoff, Murgo, Faith, & Wybran, 1991). Post hoc tests indicated that there were significant changes in burnout and anxiety, but not for depression, stress, and immunity. This suggests that PMR is an indicator of light trance, as it physically relaxes the person and may reduce anxiety symptoms and in turn may reduce burnout pressure to a significant degree. The results in this study suggest, however, that PMR as a hypnotic intervention is not powerful enough to modify depression and stress, as measured by the DASS, and immunocompetence as measured by sIgA.

Even though it was stated that the research on the effectiveness of GI has not been well established to date (Brannon & Feist, 2004), the third hypothesis asked if GI and its ability to target brain-body transduction could reduce negative affect and increase immunity. Significant changes were found from paired sample *t* tests for all negative affect scores. This supports the suggestion that hypnotic induced guided imagery that releases negative feelings and memories taking a subject into a deeper level of trance after relaxation lays the groundwork for powerful change (Barrett, 2001). In this study, GI targeting physical relaxation and emotional catharsis significantly reduced burnout, depression, anxiety, and stress, but did not significantly change immune system response. It is further suggested that these results support the importance of the structure of the trance induction upon the outcome and participant change (Hunter, 1994), but with an extra component required to affect immunity.

It was expected that deep trance with specific immune boosting suggestions would further reduce negative affect and increase immune system response. Post hoc ANOVA results indicated significant changes in burnout, depression, and anxiety, and significant changes in immunity. The specific language targeting mind-body healing and immunocompetence in this DT moderated all variables of depression and anxiety. However, stress was not significantly changed by the deep trance as predicted. The stress scale used on the DASS, as suggested with regards to hypothesis two, may not have been sensitive enough to the construct of stress in this context with the healthy sample used in this study. Further, this study was only conducted over four weeks and more intervention time (for tape playing) may have been required to effect positive change.

This research also indicated a significant positive correlation between frequency of tape playing and changes in depression and stress, with a higher correlation for changes in burnout. No significant result was found for anxiety. This result suggests that the greater the expectation of the subject to experience a positive outcome from the hypnotic intervention, the greater the reduction in negative affect (except for anxiety) as measured by the DASS. It appears that positive expectancy, although tied to better physical health outcomes in previous studies (Scheier et al., 1989) did not extend to the benefit of anxiety in this study. This would suggest that positive expectancy alone could not override one's pre-existing pattern of anxiety.

The above findings are congruent with the PNI intervention studies using hypnosis, which generally produce positive changes in immune functioning and reduce negative affect (Ader et al., 1991). Support has been demonstrated for integrative hypnotherapy combining a pluralist approach towards positive change for an individual's wellbeing, symptomatology, and immunity (Gruzelier, 2000).

Overall, psychological interventions such as hypnosis mediating the major behavioural and biological pathways of mind-body communication have been shown to be capable of modulating negative mood states and the immune system response. The use of deep trance combined with progressive muscle relaxation and guided imagery with specific suggestions for the immune system is most likely to produce the greater changes. It was also found that the conditions of emotional burnout and anxiety were both seen to benefit from the simplest and lightest of trance work demonstrated as PMR.

The small number of participants involved in this study limited its power. A larger sample of at least 30 per treatment group and more equal proportion

of male and female participants would have enhanced the study's power and increased its external validity. Also, a larger sample size, with a better gender balance, may also have facilitated an analysis of any gender differences. The study may also have needed more intervention time beyond one month to register further positive change, especially considering the varied use of audio tapes by some participants.

Future studies could also utilise an additional instrument measuring stress, as the DASS may not have been sensitive or specific enough to detect significant change. The healthy population studied may not have been significantly stressed (compared to a population with disease or illness population) to enable affect change. The use of other measures of immune system functions beyond the samples taken, would empower the robustness of the study. Other supporting measures, such as blood tests, could have been more robust for the study, but would have added to the cost of the study.

CONCLUSION

In this study, it has been demonstrated that hypnotic interventions combining relaxation, guided imagery, and deep trance targeting mind-body communication can alter negative affect and enhance measures of immune system response in healthy clients. Healing with hypnosis holds a powerful key to the transformation of mind-body therapy.

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A LESSON FOR CLINICIANS: SEEKING WISDOM IN HYPNOTHERAPY, OR HORSES FOR COURSES – PERSONAL REFLECTIONS

William W. Pitty
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We have an affective core to our lives which is shared by all humanity ...
Affects are central to those later relationships which we call intimate ...
Emotions, at the bottom, are always expressed in terms of metaphor.

— Meares (1992, pp. 28, 31)

Thoughts connected as we feel them to be connected are what we mean by
personal selves.

— William James, quoted by Meares (1992, p. 139)

OVERVIEW

The relevant conditions for trance induction are noted, together with the Spiegels' description of individual differences in potential patients and their hypnotherapists. Wisdom is defined and three truths of human experience are enunciated. Observations are made of how the focus in this clinical field has moved from personal qualities to relationship characteristics. In practice, therapeutic approaches vary from "playing God" to believing that the source of lasting change is primarily within the patient (the Kingdom of God is within you). Four brief case studies, based on the author's first-hand experience, are presented. In each case, morals are drawn that relate the therapeutic dynamics to the central concepts of the cited "wise men of the West," especially those of metaphor in a family context.

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The close relation between psychotherapy and hypnotherapy is symbolised, using the metaphor of two keys to provide access to pertinent processes, and some persons of historical significance have their portraits on show in the Hypnosis Hall of Fame.

Several wise men, all clinicians from psychiatry and psychology, are consulted with a view to developing a coherent conception of the kind of mental functioning that helps the process of healing. Agreement on the distinction between feeling as the source of motivation and thinking as the maker of cognitive meaning is noted, leading to the idea of two minds, a thinking mind (TM) and an ancestral mind (AM) in the one body. This is consistent with the idea that the neural systems which are responsible for emotion and intellect are separate, and that this creates a chasm between them in our minds and actual lives (see Lewis, Amini, & Lannon, 2000); hence the desirability in complex cases for the therapeutic process to involve a reverie-like mental state. Communication at the level of psycho-logic (themes, metaphors, ambiguity, puns, parallel processes of experience in situations and relationships), rather than solely at a logical level, is considered more helpful for healing.

The issue of the relative importance of the quality of the therapeutic relationships and the variety of techniques in hypnotherapy is discussed, leading to the conclusion that there are “horses for courses” in this situation in the chairs of both patient and therapist. Finally, perhaps Gendlin (1996) is right to focus on his mind/body technique of *the felt sense* of our immediate experience, rather than intellectualising about how many, or different, mental states we have. It seems to the mind of Pitty that his formulation is consistent with each of the three wisdom truths: The whole is greater than the sum of its parts; enlightenment consists of the progressive widening of the context of understanding; and that, other things being equal, the simplest explanation is to be preferred. Yet William Pitty believes that the majority of clinical cases/situations are complex, rather than simple.

INTRODUCTION

In this article, I suggest that you will help yourself to understand my messages if you give yourself permission to see *both* the minds that you have in your body: the thinking one (in the cortex) and the ancestral, intuitive or atavistic one (in the limbic brain). At the thinking level of mental processes, I will outline the variables (see Table 1) involved in a hypnotherapeutic relationship.

Table 1: The Pieces of the Puzzle: Definitions, Classifications and Truths

Wisdom	Knowledge of what is <i>true</i> or <i>wise</i> , coupled with just <i>judgment</i> as to <i>action</i> ; sagacity, prudence, common sense. (Macquarie Dictionary)
Horses for courses?	B f (P x E). Both persons (P) and environments (E) vary
Hypnosis	A body/mind state characterised by focused attention, absorption into the world of the imagination, heightened suggestibility
Spiegels' classification of patients	<i>Apollonians</i> : emphasise rationalisation, low hypnotisability (H) <i>Dionysians</i> : comply compulsively with external symbols, high (H) <i>Odysians</i> : alternate between compliance and rationalisation, medium (H)
Conventional classification of symptoms	<ul style="list-style-type: none"> • Habit disorders (e.g., bedwetting, smoking) • Neuroses (e.g., phobias, anxieties, depression) • Psychoses (e.g., schizophrenia, bi-polar) • Psychosomatic disorders (e.g., asthma, sexual disorders)
Means of influence	<ul style="list-style-type: none"> • Direct, logical, cognitive • Indirect, psycho-logical, metaphorical
Sources of change	<ul style="list-style-type: none"> • The patient • The hypnotherapist • Their relationship
Duration of change	<ul style="list-style-type: none"> • Short, medium, long term
Truths	<ul style="list-style-type: none"> • The whole is greater than the sum of its parts (Gestalt) • Enlightenment consists in the progressive widening of the context of understanding (Mehl) • Other things being equal, the simplest explanation is to be preferred (William of Occam's Razor)

These variables comprise definitions, classifications of personality types and wisdom truths. This is done in order to set the scene for what is to follow.

Now I will ask you to listen closely to, to perhaps identify with, four selected illustrative cases. Be sure to register the moral of each case in both of your minds. Remember that each one is based on *first-hand experience* of William and the other person. And remember the power of Will and his mother's maxim: "Where there's a will, there's a way" — and that during a psychotherapy conference in Brisbane once upon a time, not your time and not my time, but a very good time indeed, when monkeys chewed tobacco

and birds built their nests out of old men's whiskers — and his name tag read WILL I AM, King of the Fairies.

SELECTED ILLUSTRATIVE CASES

The five selected case studies deal with Dick, Bonny, Barry, Will, and William and a short description of each person's issues follow.

Case 1 Dick was a secondary schoolboy, a frequent bed-wetter with a recurrent and concurrent dream. Interpretation revealed a complex problem of family dynamics. Subsequently, this interpretation was corroborated by a social worker from another agency. A body awareness training program produced erratic change initially. (*Moral:* The symptom was not only a habit disorder, but also had a metaphorical message about the family context.)

Case 2 Bonny was an adopted adolescent who had not eaten fruit or vegetables since she was 12 months old, according to her "Mother," now working in the fitness industry. In trance, she took a visit to the Elf Man in his organic orchard, resumed normal food intake in four sessions — minimum overt pressure or "interpretation." The process of her adoption "out of bounds" was at her Mother's request. Learned that Bonny has celebrated passing the Leaving Certificate by going sky diving. (*Moral:* Accentuate the positive, Erickson's utilisation principle, to break the habit.)

Case 3 Barry was a divorced home-body technician living with his de facto wife and child, and her earlier three children by different fathers. He had not been to work *at work* for a year — and had a personal boundary some 400 yards from home. Prone to panic attacks, he feared having a heart attack. Subsequent social experience of jealousy precipitated a psychosomatic heart attack. Eventual reassurance of the stability of his relationship and consequent marriage plus education in psycho-logic was therapeutic. (*Moral:* The symptom path to Enlightenment [Rossi, 1971].)

Case 4 Will — an under-confident, addicted golfer in a pressure situation (a replication from the championship a year earlier, when he committed hari-kiri in a playoff) — has his self-belief in his ability to do himself justice strengthened during trance, together with challenging process slogans by a professional non-golfing protégé. He has a round of 11-under as a consequence of consistency, relaxation and rhythm. (*Moral:* Empowerment via hypnotic relationship.)

Case 5 William, having suffered the chronic pain of osteoarthritis in his hips for at least a decade, volunteered for finding a better solution than various other techniques, with Ernest Rossi during an ASH Congress. In trance he needed to shift his *physical* position to ease the discomfort in his body from time to time. Suddenly, he experienced a mind/body parallel, that it was time to change his *mental* position on surgery as a solution. Subsequently, he bushwalked (following surgery replacing both hip joints within two weeks) for three days over 40 miles to a personal sacred site, the source of the Murray River. (*Moral*: Gendlin's felt sense via metaphor.)

So now notice that I hold in my hand *two keys* (*the postscript holds the key to the keys and you can read this now or later, whichever you prefer*). This first main key gives us access to the Hypnosis Hall of Wisdom, to the Psychotherapy room with its interrelated areas of *being with* (empathic rapport), *having with* (constructive encounter with the central dynamics of the person/situation), and the *doing with* of relevant actions for experiencing solutions both within, and without, the person in his or her social context (significant others, personal pastimes, social groups). Now focus on the second key ... it has mysteriously crossed the Nullarbor from Melbourne to Perth under its own power. How can that be? Who hypnotised or motivated its movement? This key gives us access to the Hypnotherapy room which opens off the Psychotherapy room. Here the language of communication is expressed in recurrent themes, symbolic meaning-laden metaphors, *Pitty* puns, and parallel processes of personal relationships. Please take a good look at the photographs hanging on the walls of these two adjoining rooms — there's Freud, Jung and Adler, Janet, Esdaile of India, Mesmer ... and blow me down if this is not Bhagwan Shree Rajneesh. And now in the Australian section we have Gordon Hammer looking his cheeky self ... and now here's Ainslie Meares with his son Russell ... Oh, now I notice that I overlooked the man in purple in his electrified wheelchair and there are a couple of his American disciples — Haley and Rossi — you can see that we are in the visual presence of several stars of therapy. Eugene Gendlin with a focused look on his face, and Lewis Mehl looks as if he's longing for an intimate relationship with Thomas Lewis and his colleagues at the Medical Center there on Parnassus in San Francisco.

So with the permission of your will, you may now drift into your intuitive, imaginative mind, while I while away our time by reminding you of the hypnotic gifts these wise men (sorry about the absence of women, I would have liked a feminine touch) bring to us.

MEETING SEVERAL WISE MEN

So let us take a journey through the discoveries of several wise men through reflecting on their writings. They are: Ainslie Meares; Thomas Lewis with Fari Armini and Richard Lannon; Milton Erickson ... via Jay Haley; Eugene Gendlin, Irvin Yalom; Lewis Mehl; and Gregg Jacobs.

1. AINSLIE MEARES: *The Door of Serenity* (1958); *A System of Medical Hypnosis* (1960); *The Wealth Within* (1978).

Let's start with the local seeker of wisdom, of healing. What does Ainslie Meares have to say for himself? "All those who are engaged in clinical work with hypnosis must be impressed by three aspects of the hypnotic state: a certain primitiveness, the importance of suggestion, and the operation of psychodynamic mechanisms such as psychological defenses. The atavistic hypothesis accounts for each of these phenomena" (Meares, 1960, p. 57). "Several considerations lead to a practical point in the application of suggestion to hypnosis. It is clear that we should not regard suggestion as illogical in the sense of being opposed to logic, but we should look upon it as something *biologically primitive*, something that simply does not know of logic, because it comes from a period of our development antedating the evolution of logical processes" (Meares, 1960, pp. 58–59). "The atavistic hypothesis requires that regression be applied, not in the field of behaviour, but in the field of mental function — that is, regression from normal adult mental function at an intellectual logical level, to an archaic level of mental function in which the process of suggestion determines the acceptance of ideas. This regression is considered to be the basic mechanism in the production of hypnosis" (Meares, 1960, p. 59).

In acknowledging his father's influence, Russell Meares in a personal communication to me said: "The most important element in the generation of psychological health depends upon a certain kind of consciousness which, in a typical case, is disrupted by anxiety. I was particularly influenced by *The Door of Serenity* in thinking about modes of treatment. I was also very interested in his subsequent work and his ideas such as the significance of reverie." Some years ago, I heard son Russell talk of Father Ainslie's desire to learn how to heal people, and how the case of Jenny reported in *The Door of Serenity* was very influential in his decision to follow in his father's psychiatric footsteps. In elaborating on Ainslie's experience of working with seriously ill people, he concluded that "in most patients significant change does not come about through 'insight'; rather that recovery seemed to be related to the physician's

understanding of his patient. He considered that the main healing effect comes through the therapist's fostering a form of mental activity that is non-linear and non-logical, and that is found in states such as reverie. This state is broken into by moments of anxiety, so that the principal therapeutic task is to deal with these intrusions of anxiety, in order to allow the healing form of mental function to begin again. This approach conforms, in broad outline, to that based on the metaphor of play space (c.f., *The Metaphor of Play. On Self, the Secret and the Borderline Experience*. Russell Meares (1992).” It is noteworthy that Russell Meares (2000) developed these therapeutic concepts in greater detail in *Intimacy and Alienation: Memory, Trauma and Personal Being*.

2. Now let us hear from THOMAS LEWIS, FARI ARMINI and RICHARD LANNON (2000). *A General Theory of Love*.

These three psychiatrists from the Medical Center in San Francisco have combined to write the best book that I have read in a decade on the emotions in relation to health and illness. “More than three hundred years ago the French mathematician Blaise Pascal wrote: ‘The heart has its reasons whereof Reason knows nothing.’ Pascal was correct, although he could not have known why. Centuries later we know that the neural systems responsible for emotion and intellect are separate, creating the chasm between them in human minds and lives ... Because of the brain’s design, emotional life defeats Reason much as a poem does. Both retreat from the approach of explication like a mirage on a summer’s day” (Lewis et al., 2000, pp. 4–5). “Science has not been able to sketch a framework for love that is both sound and habitable ... Modern neuroscience has been as culpable as behaviourism, and cognitive and evolutionary psychology at propagating an unappealing and soulless reductionism ... is every mood and manner best understood as the outcome of molecular billiard balls cannoning around the cranium? When emotional problems arise, is a steady diet of Ritalen for children and Prozac for adults, to be our only national response? If a woman loses her husband and becomes depressed, does her sorrow *signify*, or is she just a case of chemistry gone awry? Science is a newcomer to the business of defining human nature, but thus far has remained inimical to humanism ... In spite of what science teaches, only a delicate admixture of evidence and intuition can yield the truest view of the emotional mind ... Common sense must combine an equal measure of imaginative flight and an aversion to orthodoxy ... We searched for the science of love. Finding no such system in our own field, we went hunting in other disciplines ... After several years of cross-pollination from a panoply of disciples,

the interdisciplinary maelstrom coalesced ... A revolutionary paradigm assembled itself around us and we have remained within it ever since. Within that structure, we found new answers to the questions most worth asking about human lives: What are feelings, and why do we have them? What are relationships and why do they exist? What causes emotional pain, and how can it be mended — with medications, with psychotherapy, with both? What is therapy, and how does it heal? How should we configure our society to further emotional health? How should we raise our children and what should we teach them? (c.f., Donald Winnicott's three necessary lives of psyche, relationships, and culture [1986, pp. 35–36].) People who do not grasp the principles of love waste their lives and break their hearts. The evidence of this pain surrounds us, in the form of failed marriages, hurtful relationships, neglected children, unfulfilled ambitions and thwarted dreams ... The roots of that emotional suffering are often unseen and passed over, while proposed remedies cannot succeed, because they contradict emotional laws that our culture does not recognize. These laws are written in stone somewhere within the heart, regardless of how long they manage to elude discovery” (Lewis et al., 2000, pp. 12–13).

Early emotional experiences knit long-lasting patterns into the fabric of the brain's neural networks. Their therapeutic process for changing the emotional mind is:

- limbic *resonance* (empathy) – a person's inner world resolves into themes, a handful of motifs;
- the metaphor of music is used to describe the healing process. You need someone with a keen ear to catch your melodic essence;
- emotional regulation – we regain *balance* (homeostasis) *through relating with others*;
- when out of balance, people use available sources of comfort (e.g., groups, clubs, pets, friendships, masseurs, and the internet): All of them have potential for emotional connection;
- therapists need to demonstrate *emotional modulation* by living it, by acting as models, as teachers by example;
- this emotional skill is learned *implicitly*, until it becomes automatic, like tying shoelaces;
- medication can sometimes stir emotions when relationships cannot;
- the seed of *trust* must precede both psychotherapy and pharmacology.

Effective psychotherapy consists of changing people through the revision of the limbic/emotional brain of the other person. The goals in sequence are:

1. Knowing someone.
2. Modulating emotionality.
3. Revising the neural code of experience that directs one's emotional life.

(This formulation has strong similarities to that of Pitty, 1994).

These authors criticise short-term psychotherapies (instant remedies, quick fixes, magic bullets) — the neo-cortex (the thinking brain) masters taught information readily, but the limbic (emotional) brain takes mountains of repetition.

3. MILTON ERICKSON (1973) via JAY HALEY: *Uncommon Therapy*.

If Ainslie Meares is Australia's wise man in this field I have no doubt that Milton Erickson is America's, and that Jay Haley is an observant disciple, as well as being his own man. "Hypnosis is regarded as a special type of interaction or relationship between people, a way in which one person communicates with another. The approach is strategic in terms of goals, procedures and special techniques for dealing with resistance. There is a common theme, as well as a sequence of steps, despite the diversity of forms. For example, the following analysis is made of the Case Example: *the frequently copulating couple of academics*" (Haley, 1973, pp. 138–139):

- A paradox is posed: The patient is directed to change his behaviour spontaneously, yet to do so on direction (e.g., "Don't do as I say, behave spontaneously of your own free will"). That is, two levels of message are communicated simultaneously.)
- The way the patient adapts to such conflicting directives is to change and behave in a way described as trance.
- An essential aspect of both hypnosis and therapy is the need to motivate someone to cooperate fully in following directions and to deal with resistance as it arises.
- When a person has a symptom, by definition, he is indicating that he cannot help himself. His behaviour is involuntary.
- Although Erickson communicates with patients in metaphor, he avoids interpretation of these metaphors. That is, he communicates at a psychological level, rather than at a logical one.

There are three very important considerations in hypnotic psychotherapy:

1. The utilisation principle of patient and situation qualities to provide action to achieve desired goals.
 2. The unique opportunity to work separately, or jointly, with different aspects of the person, and thus to establish centres of integration.
 3. The value of enabling the patient to recreate and to vivify past experiences free from present conscious influences and undistorted by his maladjustment, thereby permitting the development of good understandings, which lead to therapeutic results.
4. Eugene GENDLIN (1996). *Focusing-Oriented Psychotherapy: A Manual of the Experiential Method*.

This psychologist's central concepts relate to the organisation of experience, the "felt sense" as the connecting link between mind and body, and his emphasis on the immediacy of experience. Gendlin considers whether cognition is the basic organisation of experience. There is a basic theoretical difference between cognitive therapies and others. Cognitive therapy assumes that all human experience is determined by cognitions, by conscious and unconscious "assumptions". The opposite view is that cognitive assumptions are superficial, and merely hide deeper facts of biological, interpersonal and psychic life. Both theories are simplistic, says Gendlin. Our bodies and our interactions are organised by many more basic factors, and cognition is only a *further* organising of human experience. We see animals act in accordance with certain relationships in their environment, but we do not assume that animals think of abstract relationships *separately* as pure cognitions. Neither is most human experience organised by separate cognitions.

Gendlin asks, what is experientially connected thinking? He distinguishes it from "intellectualising" (c.f., Fritz Perls on just "talking about," rather than "living in the now"). Gendlin says that we have been taught to think at a great distance from experience. We can wait *for* a thought which connects with experience and then we pursue not only what the thought implies, but also what has opened in the experience. But the experience has to be able to grow and develop. Therefore it needs to be *the felt sense* of the event, emotion, or problem. However intractable something seems to be right now, the felt sense of it can open and move forward. Emotion is not the crucial kind of experience, either, says Gendlin. When one moves to a felt sense one discovers that emotions also are embedded in a whole mesh. A shift in the felt sense brings new emotions and new cognitions that move life forward (Gendlin, 1996, pp. 240–241).

5. Irvin YALOM (2001). *The Gift of Therapy*.

This Californian psychiatrist from the Bay area has written and taught extensively, describing his existential approach to helping. He has an international reputation as a quality scholar. To my knowledge, he does not use explicit hypnosis during therapy. After Heidegger, Yalom cites two modes of existence: the everyday and the ontological, the realm beyond everyday. In the everyday we are consumed with and distracted by material surroundings, by *how things are* in the world. In the ontological, we are focused on being *per se*, with *that things are* in the world. When we exist in this realm beyond everyday concerns, we are in a state of particular readiness for personal change. Such personal change is fostered by “boundary experiences” that are urgent experiences that jolt us out of “everydayness” and rivet our attention on “being” itself (e.g., confrontation with the imminent possibility of death). Hence Yalom argues that cognitive behaviour therapy (CBT) is not what it is promoted as, since research treatment modes heavily favour this approach, and exclude most traditional therapies that rely on intimate unscripted relationships forged in genuineness and focused on here and now, as it evolves spontaneously. Thus there is more in the mix of body/mind/spirit complex than is ever dreamed of by CBT.

6. LEWIS MEHL (1986). *Mind and Matter*.

This radical approach to healing of chronic illness comes from a medicine man with a part Cherokee Indian heritage. He integrates his philosophy of treatment and provides detailed case examples. He was disappointed that in his medical education at Stanford University, there was no mention of spirit, since he had seen the influence of this dimension in his home context. Mehl has such a variety of techniques at his disposal that he realises that enlightenment consists of the progressive widening of the context of understanding, yet also believes that the quality of the therapeutic relationship provides the essential healing. Mehl says that his book is about mundane miracles, the process of the human being becoming whole again. The process of relationship is emphasised within many modalities: acupuncture, acupressure, natural remedies, homeopathy, hypnosis, visualisation, bodywork, applied kinesiology, nutrition and others. However, it is not the technique that heals the patient with his/her chronic illness, but the relationship: Techniques simply provide him with a vehicle for relationship. Mehl argues that if technique healed people, then all people would respond to the same technique (1986, p. x). (To my mind, this assertion — that technique does not heal — denies the significance of

individual differences.) Spirit is what moves therapy and healing. It is that part of us we sense on a mountain top. It belongs both to our bodies and to the world of the unseen — the part of us that we most innerly identify with. We live in a materialistic world which is high on technology and low on spirit. That is why psychology and psychiatry are not sciences of healing — they concern themselves with the objectification of emotion. Therapy, as it is practised in the world today, cannot necessarily lead us to wholeness. Mehl's style of therapy requires a commitment to emotional honesty. Honesty opens the body for expression. *He* had to learn to reflect *his* inner feeling (not the client's) in his body. One of Mehl's case examples is with Wanda who has diabetes. He comments: "Faith in the transcendence of the individual and innate potential is one of my beliefs." The medical-model thinker would believe that diabetes cannot be improved except through change of diet, drugs and exercise. If I had believed so, Mehl says, I would never have taken the opportunity to work with Wanda, who made tremendous changes. "I would never have learned what she taught me about the relationship among emotions, beliefs and diabetes" (Mehl, 1986, p. 325).

7. GREGG JACOBS (2003) *The Ancestral Mind*.

This author, from Harvard's Mind/Body Medical Institute, distinguishes two minds in one body, the Thinking Mind and the Ancestral Mind. His essential message is that if we are to improve our lives and guarantee a fulfilling future we must invest in the Ancestral Mind as heavily as we do in the Thinking Mind, for nothing less than our health and well-being as a species is at stake. Jacobs argues that in the U.S.A. the four best-selling drugs are for stress-related problems: ulcers, hypertension, anxiety and depression; that people feel increasingly *disconnected* from themselves, from others and from the world. (cf., Winnicott's three lives of psyche, relationships, and culture). Jacobs' solution is to prescribe a program to bring back the joy of living by enhancing mind/body control, and by producing a mental state that both minimises unhealthy negative emotions and promotes powerful life-enhancing positive ones. He says that the modern world of commerce is predicated upon the belief that the Thinking Mind (TM) is our *only* mind.

There is a consequent subservience of the Ancestral Mind (AM). The AM is what is operating when:

- A child plays with a toy in a state of wondrous excitement. While playing, she is unaware of time or sense of self, and becomes completely absorbed in the toy that is as alive as she is.

- You are speaking with someone whom you have just met and, uncertain of why, you take an immediate dislike to him. Through unconscious perception of the person's vocal tones, facial expressions, and body language, you intuitively sense that what he is saying is not really what he means.
- A bushwalker stops to watch a pink and orange sunset over snowcapped mountains. The image is so powerful that it commands his full attention, quieting the constant chatter of his Thinking Mind; in this state of "being," rather than thinking, the bushwalker's awareness merges with the present, and the boundaries of self-consciousness disappear. The walker experiences a feeling of unity, of being part of something timeless and infinitely greater than the self (c.f., Mehl's definition of spirit, and Yalom's distinction between the world of everyday concerns and those of the world beyond). Jacobs says that by reconnecting with the Ancestral Mind, we should be able to achieve a deeper dimension of daily existence, that is, a greater ability to take charge of stress and unhealthy mind-body interactions.
- An improvement in cardiovascular disorders, insomnia, chronic pain and gastro-intestinal problems.
- More energy and vibrancy in daily life.
- An improved self-awareness, inner strength and self-esteem.

Jacobs' descriptions of the Thinking and Ancestral Minds with their contrasting characteristics (2003, p. 42) can be illustrated by a selection of their respective qualities: rational, verbal, analytical vs emotional, non-verbal, intuitive; consciously aware vs primarily unconscious; detached from experience vs based in experience; separate from Nature vs a part of Nature; subject/object relations seeking utility vs holistic and integrated; focused on facts and figures, explanations, cause and effect vs open to mysteries, childlike.

Having built his conceptual framework of these two different, but complementary, aspects of mind, Jacobs turns his attention to the means of reclaiming the power of the Ancestral Mind. Here his chapter headings read: "Taming Toxic Thoughts"; "The Power of Stress-Reducing Attitudes and Beliefs"; "Social Support and Stress Hardiness"; "Opening the Door to the AM"; "The Relaxation Response"; "Before Words, Images Were"; "The Ancestral Mind's Minimal Daily Requirement"; "Solitude and Wilderness"; "Medicine for the Soul"; "Through the Eyes of the Child."

His book has the following appendixes: "Physiology and the Brain"; "The Effects of Stress on Health"; and "Additional Relaxation Scripts."

DISCUSSION

In his emphasis on the importance of relationship over technique, Lewis Mehl asserts, “if technique healed people, all people would respond to the same technique.” Perhaps there is a greater variety and healing potential in relationships than there is in technique, but there is an inevitable interaction between therapist, technique, and patient. However, remember the variety of techniques used to therapeutic effect by Milton Erickson. Yet these were based on his understanding of the particular person/situation, for example, the readiness of the old man complaining of lack of sleep to follow Erickson’s advice in the form of an ordeal (polishing floors all night). And I am sure that the Spiegels would use different techniques for those they classify as Apollonians (rationalisers) and those they classify as Dionysians (compulsive compliers with external symbols). I recall now that Ainslie Meares described his dynamic approach to trance induction following the close observation of the patient’s preferred sensory mode during a cursory routine physical examination.

So cognitive techniques may suit those patients who give precedence to thinking over feeling, and who present with simple problems of living and some habit disorders. But the chances are that they will not be readily hypnotised to a deep level of awareness, because they do not live habitually in the world of their imagination.

Finally, perhaps Gendlin is right to focus on his mind/body technique of *the felt sense* of our immediate experience, rather than intellectualising about how many or different mental states we have. It seems to me that his formulation is consistent with each of the three truths: the whole is greater than the sum of its parts; enlightenment consists in the progressive widening of the context of understanding; and that, other things being equal, the simplest explanation is to be preferred.

CONCLUSIONS

It is perhaps best to keep in mind a number of prerequisites for therapy:

- There is plenty of evidence from respected clinicians that different mental states exist; and that in complex cases the healing process follows a non-logical mode.
- A holistic approach (body/mind/spirit in social context) is preferable to a partistic one such as CBT in complex cases, including when hypnotic influence is combined with psychotherapy.
- The selective use of hypnosis in appropriate contexts can produce a state of reverie. It is probable that the ancestral mind functions psycho-logically rather than rationally, and provides access to the central dynamics of the problem leading to a course of action being chosen by the patient which is then reinforced regularly (post-hypnotic suggestion).
- In complex cases, hypnotherapy may provide access to relevant feelings, memories, and thoughts from different levels of awareness. Symbols, metaphors, themes, and parallel processes in relationships are the currency in this realm.

POSTSCRIPT

My son, Hugh, was in a highly emotional state at the time I was writing the second draft of this article. He was aware of my delight and unexpected joy at discovering that a second key for my second-hand Peugeot sedan had crossed the Nullarbor inside a recliner rocker chair and had reappeared within a day or two of my arrival at his brother's home in Subiaco. So I decided to introduce my Perth presentation by having the two keys represent the close relationship between psychotherapy and hypnotherapy. Perhaps a more relevant metaphor might be that the primary key represents the Thinking Mind (TM) and the second key represents the Ancestral Mind (AM); especially as I had spent much cognitive time in thinking about how this second key could have disappeared so completely for some eight months. He sent this piece on Emotional Wisdom to me.

Emotional Wisdom

So you want to unlock the door and open the way for the person to make the changes that take them through to the next stage of their growth as a human

being. You need to turn both keys: the Key to the thinking self (head) and the Key to the feeling self (heart).

What is more, both keys must be turned at the same time to unlock the door and open the way ... This is vital because it is the relationship between the two complementary aspects of self that is vital, for it is in this relationship that the interplay of different ways of being is able to grow and develop.

In times of trouble, when the general tendency to rely on our head (that is, on rational behaviour, logic, etc.) finds us “all at sea,” “lost,” or “away with the fairies at the bottom of the garden,” then it is time to rely on our heart (impulsive behaviour, intuition, etc.) and its store of *emotional wisdom*.

When “soul-searching” for the best option to choose in a time of crisis, we can consult our storehouse of *emotional wisdom*. Upon reflection, we may say, “I knew in my heart” that it was the right way to go. Such knowledge comes from this storehouse, which having been built up over our entire lifetime includes a depth of experience beyond our conscious memory. In total, it constitutes our emotional wisdom. Yet, all the wisdom in the world will not save us (in our time of crisis) unless we are able to make sense of it ... to understand it.

So let us return to the need to turn both keys at the same time. This enables us to shine the spotlight of our consciousness upon the storehouse of emotional wisdom.

Picture a floodlight shining down a deep well
and allowing us to draw water
from the store in the bottom of the well.

This is the process of hypnosis by which a person may find that which they seek and enable them to make their way through the doorway to the next stage of their growth and development as a human being.

And at the end remember to sing the song twice ... the first time clearly yet flatly, just so people can learn the words. Then the second time ...

“And now, everybody, once more *with feeling*.”

This song, which Hugh and I had composed, was titled, “Where Have All the Feelings Gone?” The answer was that they had “gone to wisdom every one.”

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TRAUMA CLIENTS: HOW UNDERSTANDING DISINTEGRATION CAN HELP TO RESTORE RESOURCEFULNESS OF THE SELF

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This article proposes that in order to conduct therapy with traumatised clients utilising hypnosis, the clinician must first understand trauma and its impact on the self schema, be aware of what a century of trauma theorists have been telling us, and then analyse the language of trauma, type of personality disintegration, resourcefulness, and potential for recovery in order to choose carefully how to communicate with traumatised clients, both within and without hypnosis/trance states. The authors present a model which embraces three consecutive components of the therapeutic process in post-trauma conditions; this begins with absorption of the trauma content and is followed by discovery of one's autonomy and a need for self-development that should lead to broader use of the resourcefulness of the self (either pre-existing and underutilised or which requires yet to be learned or further developed). At the final stage, an individual who has suffered traumatic emotional disintegration is expected to achieve a secondary integration based on discovered values and personality ideals. The Resourcefulness for Recovery Inventory (Celinski & Antoniazzi, 1999) is presented as a newly developed instrument which identifies initial strengths and weaknesses that may be utilised in working with trauma clients.

Most practitioners of hypnosis are familiar with the concept of empowerment, as either ego strengthening or building inner resources (Araoz, 1995; Hartland, 1990; Murray-Jopsis, 1990; Stanton, 1989; Weitzenhoffer, 1989) and thus the

idea of hypnosis assisting in improving a person's resourcefulness could be readily accepted. An exploration of a link between the language of theory and the language of healing scripts has yet to be offered; additionally, the concepts relating to trauma and resourcefulness have not yet been readily available in the literature for the purpose of communicating with a traumatised client, within and without trance states.

It is the NLP community which tends to refer to models of the world (Bateson, 1979) more than traditional hypnotists, and they postulate that the understanding of assumptions (Dilts, Grinder, Bandler, & DeLozier, 1980) is a basis for conceptualising a person's problems in a way which will be useful in this article. A major assumption that the helping profession operates on is that a person can recover from trauma; another assumption connected to that belief is that recovery is due to optimal changes in the way people think and feel; and yet another assumption is that this belief has, in turn, a positive impact on their overall physiology. Empowered with research data on mind/body healing (Dossey, 1991; Rossi, 1996), certain clinicians are propelled to enter the lion's den where others dare not roam.

A global assumption upon which we operate is that meaning is inherent in language (Loveday, 1996) and that the unconscious mind expresses meanings in a metaphoric manner, through images and words which in turn may be used to implement desirable changes on a subconscious level (Gordon, 1978; Simon, 1997; Zeig, 1980, 1985).

Milton Erickson (Rosen, 1982) understood the power of language in terms of surface and deep meaning structures that primarily guide human behaviour. In the case of treatment for trauma, hypnosis is one mechanism for reaching and healing the deep structure where the trauma is embedded. Meichenbaum (1997) has illustrated, through analysing a variety of statements that traumatised people make, the special healing language that can be used with trauma cases. To this end, in order to assist clients to absorb or alter the meaning of an event, therapeutic language should aim at bypassing the defence mechanisms that people utilise to protect the stereotypes that underlie the integrity of the self (Laing, 1965). Working with deep structure requires that we understand the multilevel meaning of trauma, as well as the concept of resourcefulness, before we can utilise the healing power of hypnotic language, metaphors of recovery, and unconscious healing processes that can trigger a sense of empowerment in seriously traumatised persons.

This article commences with an overview of the concept of multilevel trauma, and then proposes a model that describes the nature of trauma; this is

followed by a description of the recovery process and the optimal treatment outcome, and the role that hypnosis can play at various stages. On a linguistic level, the clinician is advised to take careful note of the key words and phrases that represent the cognitions, feelings, and behaviours of the traumatised persons, in order to be able to speak their language, to isolate the unconscious negative and positive messages, and to be able to create healing metaphors when the opportunity arises.

THE MULTILEVEL MEANING OF TRAUMA

What clinicians might not recognise, if they have never experienced a disintegration of the self, is the condition of the “lost state of the soul” of the person who has come to see them; and thus the choice of words in the hypnosis sessions is absolutely critical. This is not a place for prepared scripts of “one size fits all”; metaphorically this is a sacred place of a soul in hell which demands the utmost respect, compassion, solidarity, and intelligence (Gow, 2002, 2003). This prerequisite is a normal part of the approach that would be utilised with traumatised clients in non-hypnotic therapy. Thus the treatment for trauma varies with the stages that the person is enduring throughout the life of the trauma, whether they are in the acute or chronic phase, or in the post-traumatic growth stage.

Additionally, it must be reiterated that the majority of traumas do not result in PTSD. We are not addressing the issues relating to the diagnosis and treatment of ASD (acute stress disorder) or PTSD per se as they have been addressed elsewhere by others such as Bryant and Harvey (Bryant & Harvey, 1996, 1997; Harvey & Bryant, 1999; Harvey, Bryant, & Rapee, 1996) and Spiegel and Cardena (Spiegel & Cardena, 1990).

The fourth edition of *The Diagnostic and Statistical Manual of Mental Disorders* (APA, 1996) stipulates that a traumatic event which may lead to the development of post-traumatic stress disorder involves the person witnessing or being confronted with an event or events that involve actual or threatened death or serious injury, or threat to physical integrity of self or others, following which a person’s response involves intense fear, helplessness, or horror. In this context, the trauma is recognised as related to either actual or perceived danger that primarily threatens their physical integrity. A further specification of trauma is its conceptualisation as a loss.

According to Harvey (2002), traumas consist of major losses of objects which have become meaningful because of the person’s emotional investment

in them. Everstine and Everstine (1993) notice that the more intense the person's experience of the event, the greater the trauma may be. They further explain that what is internally perceived as trauma is the manifestation of impaired defense mechanisms. Under normal circumstances, the person is stabilised and protected by an integrated system of defenses such as repression, denial, rationalisation, etcetera. Through time, these processes acquire a certain flexibility or adaptation to meet the demands of a wide range of life's events and experiences; they provide resilience that is useful in deflecting many assaults on the person's sense of integrity and promote recovery from emotional wounds.

Our defence mechanisms require that a lot of effort be invested in maintaining an ego-based image of reality, because the self – that allows for a sense of importance, power, and control over events – gives us an over-inflated sense of safety, invulnerability, and continuity. These illusions are further supported by culture, laws, medical knowledge, family and friends, and material possessions that basically support a sense of being able to ward off the unpleasantness of life, stabilise our experiences in a routine and manageable manner, and prevent events which can put our lives out of balance and control.

There is a further tacit assumption that the established order and routine should continue, and the longer they exist the greater is the sense that we understand our reality, which is familiar, manageable, and secure (Celinski, 2004).

When trauma occurs, defense mechanisms which serve the purpose of preventing the possibility of victimisation are broken through and the powerful external or internal stimulation has changed one's behaviour in an undesirable direction, which is then interpreted as loss of control and helplessness. It is a process which could be triggered in almost anybody, given the right circumstances, whenever laws of physics, physiology, economy, and other people's malicious intentions prevail over our own ability to defend ourselves cognitively or physically. Because people recognise their potential for being victims, and fear such an outcome, they make an effort to prevent it from happening.

Grove and Panzer (1991) noted that there are multiple levels on which traumatic experience acquires its meaning. One is a *descriptive* or *narrative* level which usually contains metaphors and symbols related to the inner process linking external situations with internal feelings. However, there is also an *epistemological* level that enables a person to discover "how the person knows

what he or she knows.” It refers to familiar attributions, concepts, and ideas that reflect the physiological or mental state in a certain familiar symbolic manner. Underlying the previous two is the *ontological* level which refers to how a person interprets reality, defines morals, beliefs and societal rules, and understands the nature of being that comprises the sense of self. Grove and Panzer (1991) explain that “the ontological level is like a great underground stream. It is the source that breeds many different epistemological experiences and has far-reaching implications. It is a common denominator of many experiences” (p. 30).

In terms of the core self, a person holds a number of personal constructs (Kelly, 1955) about the self, and when these are seriously shaken or threatened with extinction, or their existence is denied, and every value that the person has held as important in life has been seemingly shattered, then the person is in danger of core ego disintegration (Laing, 1965) and may sink into despair and become seriously depressed and suicidal. For example, by becoming a victim of war, rape or serious accident, a person’s prior perspective of the self and reality is shattered which creates a need for addressing various existential issues on the ontological level (Grove & Panzer, 1991).

MODEL OF TRAUMA AND RECOVERY

The description of the model of trauma and recovery begins with operationally defining an impact of trauma as triggering a ubiquitous mental state that has at its core the hypnotic phenomenon of dissociation leading to helplessness. This idea accords with the conclusions of Ozer, Best, Lipsey, and Weiss (2003) following their meta-analytic review that peri-traumatic emotional responses, along with peri-traumatic dissociation, are among the strongest predictors of post-traumatic stress disorder. Accepting such an understanding of trauma allows us to propose that successful treatment, optimally through hypnotic intervention, should involve reintegration of the traumatic experience with the broader sense of self that would lead to a better mastery over the traumatic memories and one’s own emotions (Spiegel & Cardena, 1991) and eventually over the objective situation that resulted in the undesirable outcome.

It is further hypothesised that recovery from a trauma depends on the development of a mental state that emerges as the result of a person utilising resourcefulness rooted in the sense of autonomy, freedom, and a desire (Frankl, 1986) for betterment and fulfilment in life.

The therapeutic process must engage both the ego and non-ego resources (Celinski, 2001). By postulating that a sense of freedom, autonomy, and desire

for progress constitute basic mind qualities on a non-ego level, therapeutic goals imply that these first need to be discovered and subsequently enhanced by the ego's deliberate efforts at their real life utilisation.

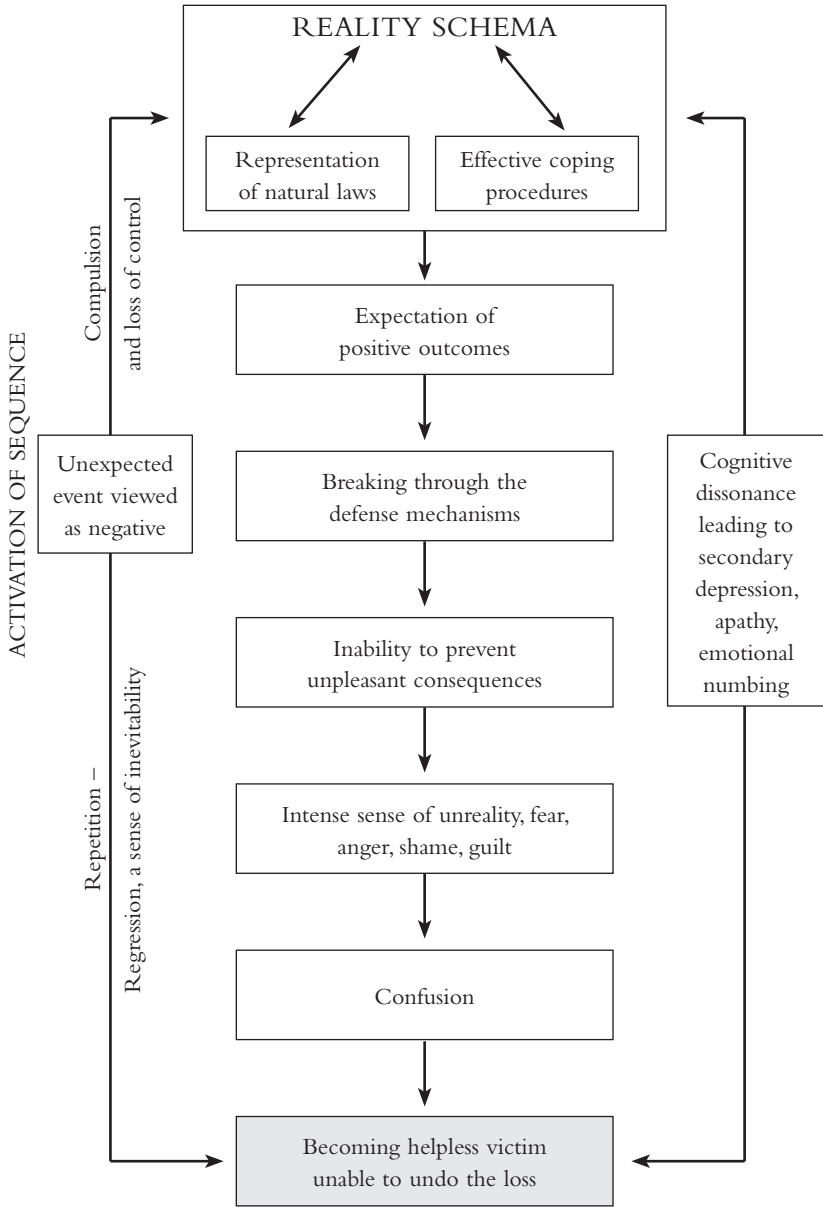
TRAUMATISATION AS MENTAL TRANSFORMATION

Figure 1 outlines the process of traumatisatisation and victimisation which commences with an individual believing that one's own understanding of self and reality is correct and sufficient for adequate functioning. It ends with a person feeling overwhelmed by forces beyond one's control and by one's own inability to change the undesirable situation which constitutes the essence of victimisation. At the core of this process lies unavoidable inadequacy of the cognitive schema, which has not allowed the foreseeing of possible ways in which the undesirable event and subsequent loss may have been prevented. Also, the inadequate cognitive schema has not permitted the choosing of the optimal action to minimise or to counteract the undesirable impact.

On the *narrative level*, a trauma establishes a sequential link between an event and a person's reaction, similar to the way that classical conditioning results in one-learning-trial or to the way an hypnotic suggestion is induced in a forceful way. Subsequently, a person may become re-traumatised by the reminders of the original traumatic event, which in turn elicit a sequence of mental states leading from relatively good functioning to being overwhelmed by fear, a sense of dread, expectation of dying, and feelings of helplessness to prevent the undesirable consequences. Early work with Vietnam veterans did not take this into consideration adequately, leading to some disastrous consequences.

The re-experiencing of a trauma through flashbacks represents a "split-off" experience from the rest of the personality (Van der Kolk, 1996) leading to a further disintegration of the self. As a trauma has a tendency to expand its negative impact by its reassociation with new situations and ideas, a natural way of coping with the re-experiencing of the trauma is through avoidance of any circumstances, thoughts, or images which may trigger the sequence of unpleasant experiences further locking up the person's own recuperative powers. As a consequence, he or she becomes withdrawn, apathetic, and depressed – a state which typically is described as the "numbing" stage of ASD (Bryant & Harvey, 1997) and PTSD. With compulsive repetition of the whole sequence, a sense of inevitability develops which leads to chronicity problems (see next section for elaboration on this point).

Figure 1: The Nature of Psychotrauma



TRAUMA AND RESOURCES OF THE SELF

However, the person cannot tolerate the conflict for long, either consciously or unconsciously, and one position or the other has to prevail in order to free one's energy from futile preoccupations (see Festinger's work, 1957). Schiffer (1978) explains how the simultaneous presence of the two incompatible images — one reflecting the current state, and the other the pre-traumatic state of affairs — results in a sense of loss which people compulsively wish to undo. In analysing this problem in his book, *The Trauma of Time*, Schiffer (1978) advocated that repetition compulsions, regarded as a natural activity of the mind, "designate a passive reproduction compelled by unconscious instinctual forces which had remained outside the organization of the ego" (p. 27). This mechanism brings forward the memory of the trauma in the way of flashbacks and images in order to force the mind to develop a creative response to reality (Van Der Kolk, 1996).

Nature itself helps us to survive and grow through trauma by not allowing it to be easily forgotten. The Zeigarnik effect (House & McIntosh, 2000) noted in various experimental and clinical reports, including research on those who are mentally retarded, refers to the mind's ability to remember better the tasks that were interrupted, in comparison to those that were fully completed allowing them to be forgotten. In explaining this phenomenon with respect to prospective memory of previously incompletely solved anagrams, Mantyla and Sgaramella (1997) stated that the observed enhancement of memory performance attributed to interruption was due to a possible increase in the level of activation of the underlying intention (in the case of PTSD, this refers to the intention to complete the action interrupted by the traumatic event), which in turn increases the individual's sensitivity to identifying the target event (in the case of PTSD, it would represent hypervigilance with respect to any reminder of the original traumatic event). Conversely, completion of the task (or closure) is the necessary condition for forgetting (Ietswaart, 1995) in line with the underlying premise of psychoanalytic therapy that aims to bring to awareness "unconcluded actions" in order to accomplish some resolution and thus to permit psychic growth.

Referring to the experience of a survivor from the concentration camps, Schiffer (1978) stated that "if he were alive today, perhaps he might have yielded to the suggestion that in his recurrent dreams of return, indeed in his very writing about them, he was driven to capture the macabre, to relive events enforced upon him in the hope that they would become transformed, and thereby allow him a mastery over their traumatic impact" (p. 2).

A traumatised person, according to Schiffer (1978), is one who is living a *present* filled with the horrors of the *past* that has become projected onto the *future* (p. 48). The more compulsively the individual clings to his/her inadequate and incomplete pre-traumatic view of self and/or reality (our schemas are always inadequate and incomplete, otherwise we would have been able to prevent undesirable events), the more intense becomes the feeling of dissonance between the actual state of affairs and how “it should be.” This results in psychopathological manifestations such as *depersonalisation*, which metaphorically means “What I have become is not me,” or *derealisation* which is a denial that reality has changed and is attributed to a dream-like quality. Schiffer regarded these phenomena as the mind’s magical attempt to “kill the time” in order to maintain an illusion of the self’s stability and continuity.

An experience of flashbacks could reflect the desire to complete the “interrupted action” in accordance with the original intention or to “rewrite the history”; for example, a person hit by a truck while crossing a street, and who subsequently experiences flashbacks about the event, is believed to seek, through the flashback, a strategy enabling him to complete the crossing of the street in a safe manner. These desires, along with constant and painful reminders of what was lost, constitute a person’s very basic motivation to rewrite the story which permits a milieu for therapeutic intervention. A lack of ability to actively utilise the “writing skills” keeps the person in a continuous state of helplessness and inadequacy. Therefore, in terms of recovery, a traumatised person’s state of mind needs to be similar to that of a general after a military defeat. Generals usually do not abandon the hope for either revenge or for changing their defeated status; rather, through countless reanalysis of the battlefields, they transform their failures into valuable experience enabling them to be better prepared when the opportunity arises. If generals have done their work properly, the sense of unavoidable defeat has been replaced with new energies, hopes, and development of measures which may increase the probability of a future victory. Quoting Eissler (1966), Schiffer (1978) observes that “just as the mind can anticipate future contingencies, so it can work in reverse; thus, an individual’s discovery of activity can have a retroactive healing effect by dissolving the past trauma” (p. 40).

According to Schiffer (1978), repetition compulsion acts in the ultimate service of maturation and restructuring. Elements from both the trauma and self become resynthesised through the ego’s manipulation; this results in false recollection because, rather than being the mirror images and impressions of a bygone actual event, the human memory recalls events in accord with the

changes undergone by the remembering ego, the latter being no longer identical to the one which initially experienced the event (p. 45).

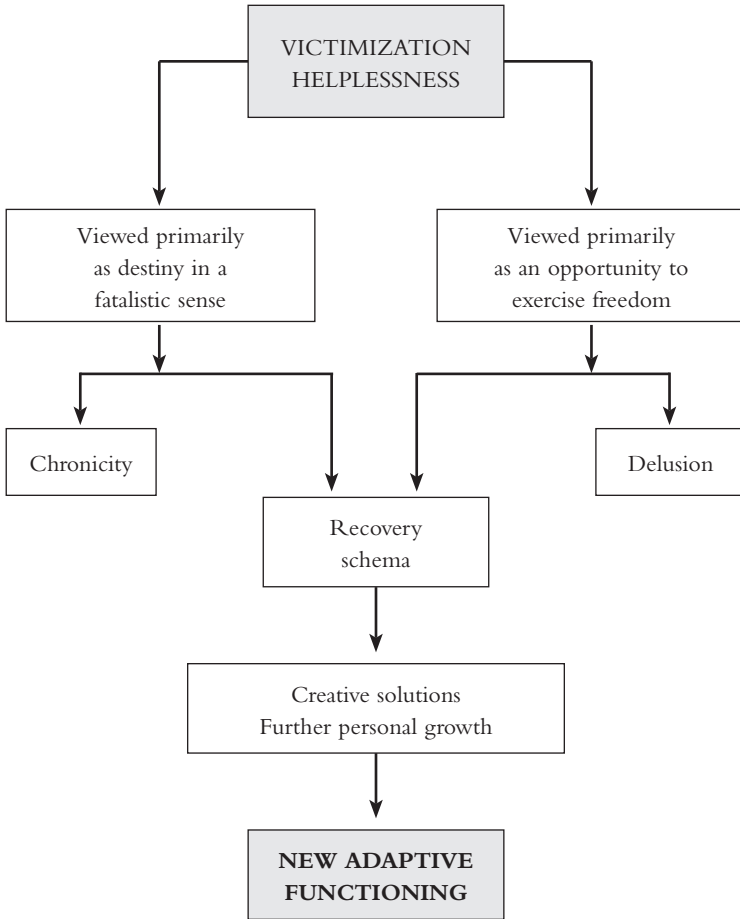
Thus, it is evident that in order to undo the effects of a past trauma, there is a need for the creative activity of the ego resensitising traumatic memories in accordance with the ego's more advanced knowledge, adaptive skills, and current intentions. Specifically, recovery requires a change in one's way of thinking from *sequential-fatalistic* to hopeful and to being broadly *aware of simultaneously existing various behavioural options* related to the original intentions that were abruptly interrupted by the traumatic event (see Figure 2). A simple example may be that a person who was painting a high-rise building and was seriously injured when he fell from the scaffolding can subsequently either compulsively visualise grabbing at the stable metal poles just before he falls, or checking the balustrade before commencing painting, leaving the unsafe work environment and reporting the fault in the chain links before beginning to paint.

In the process of undoing the loss, the passive repetition compulsion of the traumatic experience has to be reviewed regarding its multilevel meaning (Grove & Panzer, 1991), with a particular focus being on its ontological significance, in relation to the resources of the self. These resources are primarily to be sought as various types and levels of freedom (Celinski, 2004) that allow a person to intentionally influence his/her internal and external environment and to "complete" the interrupted task.

In *Freedom and Destiny*, Rollo May (1981) emphasises the major dilemma of the human mind and human existence. May postulates that the purpose of therapy is not happiness or removal of anxiety, but "to help people become free to be aware of and to experience their possibilities" (p. 20). According to May, "Problems are the outward signs of unused inner possibilities" (p. 20) and any good therapy "is a method of increasing *one's awareness of destiny* in order to increase *one's experience of freedom*" (p. 23). May defines "*destiny* as the pattern of limits and talents that constitutes the 'givenness' in life. This may be on a grand scale like death, or on a minor scale like the gasoline shortage ... it is in the confronting of these limits that our creativity emerges" (p. 89).

The first and fundamental challenge for a person in therapy is to confront his fate as it is, to reconcile himself to the fact that he *did* receive a bad deal, to know that justice is irrelevant, that no one will ever make up for the emptiness and the pain ... The past cannot be changed – it can only be acknowledged and learned from. It is one's destiny. It can be absorbed and mitigated by new experiences, but it cannot be changed or erased. (p. 35)

Figure 2: Recovery Process



May further remarks that to have an impact on destiny, one has to become aware of and acknowledge one's destiny, which is followed by a need to confront and challenge and eventually rebel against it.

“We know in psychotherapy that times of despair are essential to the client's discovery of hidden capacities and basic assets ... There is surely value in the client's experience that he has nothing more to lose, so he may as well take

any leap that is necessary” (May, 1981, p. 51): “In the freedom of being, new possibilities continually search up possibilities of new discoveries about oneself, new flights of imagination, new visions of what the world and living in it might be” (p. 58). May quotes Bernard Russell, who said that “in the realm of the mind, there are no limits” (p. 62), and concludes that in therapy the central purpose is “to help the patient discover, establish, and use his or her freedom” (p. 64).

A clinical hypnotic application of these ideas may be presented through a metaphor referring to Robinson Crusoe’s situation (Dafoe, 1998) when, after his ship was wrecked, he was thrown by the waves (forces beyond his control) on to the beaches of an uninhabited island. It was then his choice and his responsibility to either make for himself a life on the island or to wait in passivity to be rescued, or more likely to die (as the rescue came only years later). “The freedom to act confirms only the responsibility to act,” as May says. “In this sense, freedom and responsibility are united” (p. 100).

However, these two concepts create moral and cognitive challenges for a traumatised person, as they imply the necessity of accepting the ownership of the problem which was imposed against his/her will and of making an effort to find solutions which otherwise would not be provided. In this sense, one of the best metaphors can be presented as a dream by a female client who became psychotraumatized as a result of a car accident: “It is like having been raped and made pregnant, and now I have to take care of a child I did not want.” Taking responsibility first requires acceptance of the traumatic experience as a novel situation which is the source of learning inspiration and provides a possibility for an intentional and desirable self-transformation (Rossi, 2002) leading to changes even at the level of our genes that shape our physiological expressions. This process can be facilitated by skillful clinical interventions that commence with emotional processing of the traumatic experience, but will ultimately require matching the experience of tragedy with personal resourcefulness. Broadly speaking, resourcefulness refers to coping with adversity through strategies already known to an individual or through learning new suitable skills; it is about focusing on the kind of self-help that makes people “strong,” rather than disintegrated (Rosenbaum, 1990).

A practical application of these ideas was tested in Casey’s research (2002) which utilised a new scale, Resourcefulness for Recovery Inventory (RRI: Celinski & Antoniazzi, 1999). RRI views recovery from physical and emotional conditions as the ubiquitous process that begins with assessment of both the degree of victimisation, and of the potential for development of the

opposite health-promoting personal characteristics, in cases of a physical and/or psychological trauma or any negative health condition. This instrument measures 18 bipolar dimensions (e.g., control/controlled; positive/negative cognition; intentionality/lack of direction; broadening awareness/not informed; acceptance/non-acceptance; integration/ disintegration, etc.). In this context, being a victim would be reflected in this inventory as a profile with a prevalence of endorsements on the negative sides of the bipolar dimensions that may have become a person's "destiny." By contrast, endorsements that changed the profile towards the "health-promoting pole" represent a person's ability to "choose" health over illness that is reflected in the person's cognitions, emotions, and behaviours. This is in line with Antonovsky's work (1990; Antoniazzi, Celinski, & Alcock's, 2002) from pooling data from patients and professionals with respect to the factors that promote recovery.

In Casey's study (2002), the RRI was applied to assess progress made through the treatment of the Australian army Vietnam veterans diagnosed with post-traumatic stress disorder in the chronic stage. The study documented a significant improvement by comparing pre- and post-treatment measurements on 17 out of 18 RRI psychosocial variables that reflect the participant's attitude, emotions, and behaviour with regard to their recovery. The rehabilitation program did not address directly the issues represented by the scales, but aimed at educating participants about PTSD, sharing experiences, targeting some specific symptoms with emphasis on normalising experience and on anger and anxiety management, relaxation, assertiveness and problem-solving, relapse prevention, community support and reintegration. The study concluded that the veterans' benefits from such a treatment consisted primarily in their being able to *more broadly utilise their resourcefulness*, which could not be attributed solely to a sense of personal control as measured by Locus of Control (Partridge & Johnston, 1989).

The findings from Casey's study are consistent with literature describing resourcefulness as a process and outcome of post-traumatic positive adaptation, with examples being recognition and management of uncertainty, the integration of affect and cognitions, and the recognition and acceptance of human limitations (Linley, 2003). Another example of the personal characteristics that helped victims of sexual abuse cope better with the trauma included determination, a sense of responsibility, an ability to imagine and make use of creativity, a need to succeed, and general resourcefulness (DiPalma, 1994). Similar issues were uncovered as being relevant to the occurrence of depression in older women (Wilkinson & Pierce, 1997). Learned resourcefulness is also

reported to be inversely correlated with anxiety and depression (Zauszniewski, 1997).

What can the clinician glean from an understanding of the resources of the self in trauma? One suggestion is that the clinician, while listening to the story, tabulate on a page (using two columns — one for positive words/phrases and one for negative words/phrases) key themes elicited from the client. Then when the time is right, the client can be asked to indicate which of these words/phrases have meaning for them in a positive way (use a plus symbol) or negative way (use a minus symbol). Thus the clinician already has parts of a new language useful for future dialogue specifically developed for the client. Just like Meichenbaum (1997), the client can incorporate either the negative poles (reversed) or the positive poles of their trauma experiences in statements for self-hypnosis or for therapist-led scripts in hypnosis sessions.

RECOVERY AS A DEVELOPMENT PROCESS

The present article postulates that, along with the discovery of one's own freedom, a person's natural desire for betterment of life engages developmental processes that, if discovered by the person and enhanced through therapy, represent the second most important resource available to traumatised people. It is conjectured that discovery of freedom and the desire for progress could be seen to constitute the essence of any therapeutic process allowing a shift in the mindset from focusing on dysfunctional and helpless aspects of the self to active utilisation of potential resources. Similarly, psychoanalysis therapy that is based on the developmental principle regards success in therapy as a cognitive and emotional shift from oral and anal stages to genital stages. There is also some common ground with Maslow's non-psychodynamic theory (1970) which postulates that people who have been thrown back to the situation where the main priority is survival have to first direct their attention to regaining some security level and trust in other human beings before their self becomes capable of healing and post-traumatic growth (Tedeschi & Calhoun, 1995). In the end, they are expected to discover a new ontological meaning (Grove & Panzer, 1991) within a rearranged view of the world (Kelly, 1955).

Knowing these aspects of traumatic disintegration and the ways of dealing with them gives us key guiding points when working with clients in hypnosis. Likewise, understanding Dabrowski's (1996) theory of human development and of positive disintegration, as described in the next section, can mark out which concepts to emphasise in a specially prepared script for a traumatised person who may, or may not, wish to sit with their eyes closed.

Kazimierz Dabrowski (1996), a Polish psychiatrist and a founder of the theory of positive disintegration, postulates that human development advances across three levels. On the basic level, there is a group of factors which involve physical and constitutional characteristics and potentialities. A person's behaviour is characterised as automatic, impulsive, and rigid, and is controlled by primitive drives and externality. There is no internal conflict, while external conflicts are the rule. The overall picture is of little differentiation. This state may be compatible with the post-traumatic experience of regression and overwhelming helplessness in the early weeks or even months after a trauma.

The second level represents all the social and environmental influences from other persons, individually or as a group. They constitute a pattern of behaviour which is more complex and advanced because the stereotypes of the former level have been breaking down, a process that Dabrowski (1996) labels "unilevel disintegration"; people at such a developmental stage experience hesitation, doubt, ambivalence, increased sensitivity to internal stimuli and fluctuations of mood, excitations and depression, with various forms of mental and psychosomatic disharmony. At this level, there is also a tendency to change from one direction to another, or an inability to decide which course to take and to let the decision fall to chance. This mental state may be attributed to the middle phase of successful psychological therapy or rehabilitation.

The third level involves a set of factors that engage "autonomous processes which a person brings into his/her development such as inner conflict, self-awareness of choices in relation to personal growth, and ability for conscious inner psychic transformation" (Dabrowski, 1996, p. 14). Dabrowski stipulates that when the autonomous factors emerge, self-determination becomes possible, but not before. This means that an individual can *transcend*, at least to some degree, what is imposed on him by his constitution and by the developmental stages of the life cycle. This, in essence, is similar to the concepts of *transcendence* and *transformation* (Celinski, 2004) as underlying positive change in psychotherapy. Where the potential for progress is limited to the first and second set of factors, these individuals would remain within the grip of their own physical condition or would follow social pressure and their own psychological topology; such a compromised developmental potential could be described by saying "I was born that way" or "I am the product of my past," or with respect to traumatic experience: "I became a victim and cannot conceive the possibility of any change."

Dabrowski (1996) further postulates that disintegration (and this includes the consequences of trauma) could be reinterpreted as being a positive

experience (*vis à vis* post-traumatic growth: Tedeschi & Calhoun, 1995). In this respect, he refers to Piaget's formulation that "lack of equilibrium is a necessary aspect of development" (Piaget, 1967, p. 104). Development, according to Piaget, proceeds first through assimilation, that is, the absorption of newly encountered aspects of reality, and subsequently through adjustment to concrete situations of available modes of functioning (in the current terminology: resources) which he called accommodations. The interplay of these two processes, more and more active as development goes on, is called equilibrium. Disequilibrium arises when these two processes are not balanced, creating "interruption" in personal growth. If this is experienced subjectively as an incomplete task (in Zeigarnik's [1999] terms), this should trigger a need for an active, creative response. From this perspective, a traumatic disintegration may be presented to clients as a positive, even though painful, experience.

Trauma clients in their acute crisis stage can present with severe neurotic or psychotic behaviours (Horowitz, 1976). Dabrowski, with reference to the nineteenth-century American neurologist Hughlings Jackson (1993), regarded this condition as a form of "dissolution". Recovery from such a mental state, according to Dabrowski, results not in a return to a previously supposedly normal "condition," but necessitates achieving a higher level of mental functioning and creative output. As Kelly (1955) would frame it, the person has to reconstruct the self and it will not seem like the same self to the traumatised person (Gordon, 1978).

Essential for triggering the recovery process is a traumatised person's understanding that dysfunctionality has its counterpart in resourcefulness (that is shown, for example, in the RRI's bipolar dimensions). Further applying Dabrowski's (1996) model in order to initiate progressive change, it is expected that internal experiential factors begin controlling behaviour more and more, and the client's wavering must be replaced by a growing sense of direction according to the person's intentions, as opposed to what is momentarily convenient. Behaviour has to be guided by an emerging, autonomous hierarchy of values and aims associated with supporting emotions. Self-evaluation and reflection should be in constant use.

Individuals are expected to search for ideal examples and models around themselves or from within, and to start to differentiate between what is more and what is less optimal functioning for them. Critical awareness of self has to be continuous, as the whole personality structure becomes transformed by this process. It is further anticipated that as a person progresses in recovery, an attitude of disquiet, feelings of shame and guilt, an inferiority towards the self,

Figure 3: Recovery as a Development Process^a

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1. Being a victim (a sense that life is externally and permanently controlled in an undesirable manner)
 2. Acceptance of the situation that is not the consequence of one's choice
 3. Breaking the sequence of repetition–compulsion
 4. Confusion, ambivalence and hesitation
 5. Activation of a sense of autonomy and recognition of one's own resourcefulness and values; taking responsibility for finding solutions to the problems that were not the result of one's own fault
 6. Achieving recovery in accordance with previously established goals and personality ideals
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^a Follows the model of Dabrowski (1996).

and dissatisfaction with the self should naturally occur as an essential part of the process. At the same time, however, a person should exhibit more tranquility, systematisation, and conscious stabilisation of personality. While tensions and conflicts are not as strong as at the initial stage of recovery, the sense of autonomy, along with the internal hierarchy of values and aims, guides the process much more decisively, and achieving the personality ideal thus becomes more possible.

In essence, resourcefulness, associated with developmental factors promoting such dynamic shifts in the mindset, involves conscious discrimination and choice, inner psychic transformation, self-awareness, self-control, education, and auto-psychotherapy. As a final result, integration is achieved which is characterised by a new organisation and harmonisation of personality with disintegrative activities being only present in retrospection. According to Dabrowski (1996), the final developmental achievement is the secondary integration characterised by “responsibility, autonomy, authenticity and personality ideal” (p. 20). There are no internal conflicts at this level and no opposition between “what I am and what I would like to be” (p. 20). The cognitive and emotional structures and functions are fused together into a harmonious and flexible whole.

In specific terms, this outcome may be reflected on the RRI as optimal endorsements on the positive pole of the scale that are expected to be associated with a desirable health status.

TRANCE AND TRAUMA

Psychotrauma may be regarded as a natural model of how non-physical events impact on our mind in such a way to cause a cognitive, emotional, personality, and functional transformation in us from being a well-functioning individual to being a helpless victim. It also offers an opportunity to determine what constitutes recovery and to map the ways to achieve it. At its core, trauma represents a hypnotic phenomenon, as the basic principle of trauma is breaking through the ego defenses causing a dissociative state; it is similar to how a hypnotic suggestion bypasses the critical faculties of the ego that recognises the events as being either consistent or inconsistent with a sense of self and reality (Beshai, 2004) and creates conflicting mental sets of a “double-bind” type. Also on a physiological level in functional brain imaging, there is an overlapping between the induction of traumatic recalls and hypnosis (Liberzon, Britton, & Phan, 2003; Vermetten & Bremner, 2004).

Hypnotic suggestion turns what a person is potentially capable of into psychological reality. To make this happen, the strength of suggestion must prevail over one's defenses. Psychotrauma prevails over our capability to defend and control our lives in accordance with our intentions and routine ways. It triggers more archaic ways of reacting in a manner similar to that accomplished through hypnotic suggestion. This way of reacting appears natural and spontaneous, and is only possible in circumstances which cause a narrowing of our awareness and that actually limit our freedom and options. This is similar to the way in which a trance can be deliberately induced in the hypnotic state.

While the major impact of the trauma rests in diminishing of the ego functions and in triggering “split off” unmodulated responses from the non-ego functions, the recovery process has as its objective the rebuilding of functions of the ego and the self by connecting the traumatic experience with the sense of freedom and desire for progress. Unless a traumatised person makes an active effort to incorporate trauma-related meanings into a broader, flexible, and at the same time reality- and activity-oriented self, the impact of trauma will keep a person in a state of permanent disintegration. Rebuilding the self is based on the principle that our intentions lead to desirable outcomes through mental and bodily transformations; this starts with absorbing the impact of the traumatic event and embedding it into a new and broader context (Spiegel & Cardena, 1990), and matching it with our resourcefulness which may have some representation in the “reframing” techniques. Trauma

clients need to be constantly reminded that both within an individual's life and throughout human history, people have continuously been forced to find new personal resources to respond to enormous challenges in their lives. Hypnosis is particularly helpful in dealing with these issues.

Through hypnosis, a person may be able to explore resources that have been already proven to be successful, or those potentially existing sources of strength that stem from a sense of autonomy and desire for a better life. These should result in the creation of an evolving recovery schema that counterbalances negative impacts that may trigger regression to a chronic state of helplessness and victimisation. The role of the therapist is to present the perspective that trauma offers a learning experience and forces people to seek solutions from a range of resourcefulness that will make better coping possible. Such an expectation of the client's responsible dealing with the trauma can only occur after rapport and trust have been well established and the person is in a place where he/she feels safe and secure. In the end, the recovery schema is based on acceptance of the traumatic event as having been forcibly imposed on a person, absorption of its meaning as behaviour changing "corrective experience," regarding their new life situation as a challenge that requires a creative response to undo losses while viewing life as remaining worthwhile and meaningful, and activity to change life in the desirable direction through taking manageable steps.

If the person has recovered sufficient cognitive functioning, there may be a possibility to complete the RRI, which appears to be a useful instrument in identifying a patient's mental state both with respect to dysfunctionality and resourcefulness. This enhances the design of individual therapy by delineating both the process and the optimal outcome.

There remains a question, however, as to whether resilience to the impact of trauma is attributed to the same or similar factors as recovery, and whether predictions can be made regarding both aspects on the basis of initial findings on the RRI. From this perspective, the RRI, which assists the clinician to pinpoint the client's actual resources, as opposed to more vaguely understood "resourcefulness" to which most hypnotic scripts refer, can make a positive contribution.

CONCLUSION

This article has highlighted the necessity of understanding and utilising both the language of trauma and resourcefulness in guiding the traumatised client

towards recovery. An in-depth understanding of what is happening in the client's ancestral mind (Jacobs, in Pitty, 2005), as well as the thinking mind, is essential in formulating the kind of hypnotic scripts that will bypass the trauma defenses and enable healing and reintegration of the self to occur. A measuring tool, such as the RRI, may be helpful in assessing the resourcefulness of the person so that the specific information gleaned from the measure can be used during therapy, and not just as an indicator of the person's state of resourcefulness at the commencement of therapy.

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THE USE OF HYPNOSIS FOR IRRITABLE BOWEL SYNDROME

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This case illustrates the use of hypnosis in the management of irritable bowel syndrome (IBS) in a young woman recently diagnosed with this distressing condition. The use of the relaxation response, combined with suggestions designed to modify gut motility, as well as the use of an abdominal pain reduction technique, enabled this young woman to modify stress, restore sleep to normal, reduce abdominal pain, and develop a sense of self-efficacy in managing this functional disorder of the gut.

PRESENTING PROBLEM

Evelyn was a 29-year-old professional woman who had been diagnosed as having irritable bowel syndrome (IBS) by a gastroenterologist. She referred herself for hypnosis after hearing about the effectiveness of this form of treatment on Radio National's *Health Report*. The presenter, Normal Swan, had interviewed Professor Douglas Drossman, co-director of a specialist centre dealing with functional bowel disorders at the University of North Carolina, who said that some form of psychosocial intervention should always be incorporated into the standard treatment of IBS, and that hypnosis had been shown to be effective in some cases.

Evelyn reported the classic symptoms of IBS (using the Rome diagnostic criteria) which had been validated internationally in 1989 (Francis & Whorwell, 1997). These included daily abdominal pain (cramps) which became so severe that Evelyn would spend part of one day in bed each week to gain pain relief. She also reported daily discomfort with abdominal distension (bloated feeling), abnormal bowel habits (diarrhoea and constipation),

frequent bowel habits (3–4 times a day), flatulence, and feelings of incomplete evacuation and nausea.

HISTORY

Evelyn's IBS symptoms (diarrhoea and stomach upsets) started after a period of high stress. She had given up smoking two weeks before starting a new and demanding position in a law firm, and in the same week had moved into a new house with her partner. During this period, Evelyn worked long hours, leaving home at 7.30 am and returning home at 6.30 pm. On the weekends, she and her partner worked hard organising their new house and garden. Gradually, the symptoms of stomach cramps, bloating, and abnormal bowel movements became more frequent and severe and she was having "bad" days about twice a week.

Evelyn reported that the process of having IBS diagnosed had been stressful. It took five months and involved many investigations, which heightened her anxiety about the possibility that there must be something seriously wrong with her. The diagnostic process began when she saw her general practitioner because her abdominal symptoms had not settled, despite having had a relaxing holiday. Evelyn's doctor conducted a series of blood tests which revealed nothing, then she had more tests a week later, and again three and five weeks after that. At this time, she was also prescribed a course of antibiotics to rule out the possibility that she had an infection. Eventually, Evelyn's doctor referred her to a gastroenterologist who organised a barium X-ray to eliminate Crohn's Disease and other bowel abnormalities. Evelyn reported feeling quite upset because she was not told the X-ray would take a long time, nor was she warned that she would have severe diarrhoea after taking the barium.

Finally, through a process of exclusion, IBS was diagnosed. Evelyn said this meeting with the gastroenterologist was very distressing, as she found him abrupt and insensitive. She was told she would have IBS for the rest of her life, that there was no cure, and once she had IBS she would always have it. She reported also being told that seeking advice about a suitable diet was a waste of time, that stress management did not work, and that the only option was medication. The gastroenterologist then asked Evelyn if she would join a study designed to investigate the effectiveness of a new medication for IBS. She declined this request.

At this time, Evelyn's symptoms were quite severe and she saw her general practitioner, who gave her a sample of Colofac (mebeverine hydrochloride, an antispasmodic treatment for IBS) to try, which she took for two days. Evelyn

then decided to try to manage her symptoms without medication because she said the idea of just taking drugs did not appeal to her. However, she later found her symptoms so distressing that she recommenced Colofac with little effect and so decided to try hypnosis to manage her symptoms.

IRRITABLE BOWEL SYNDROME (IBS)

According to Francis and Whorwell (1997), IBS “is a functional disorder of the gut, characterised by abdominal pain, abdominal distension and some abnormality of bowel habit” (p. 1). It is more common in women than men, and affects 15% to 20% of adults. Little is known about the cause of IBS, but it is thought to be multifactorial in origin; for example, it tends to run in some families and there are a number of exacerbating factors or triggers that contribute to the onset of symptoms. These include abdominal surgery, antibiotic usage, gastrointestinal infection, inappropriate diet, stress, and sleep deprivation. IBS is thought to involve a combination of disordered motor function and visceral sensitivity. It is no longer considered a purely psychological condition, but psychological factors are seen as playing an integral role in modifying the motor and visceral responses of the gut (Francis & Whorwell, 1997).

Research on IBS continues around the world and in March 2001 the Medical Research Institute at Flinders University in South Australia received a grant of nearly US\$1 million to investigate how movement of the gut gives rise to pain and sensations from the gut (Brookes, 2001).

RESEARCH SUPPORTING THE EFFECTIVENESS OF HYPNOSIS IN THE MANAGEMENT OF IBS

One of the first controlled studies to demonstrate the effectiveness of hypnotherapy for the treatment of IBS was conducted by Whorwell, Prior, and Faragher (1984) at the University Hospital of South Manchester. In this study, 30 patients with severe refractory irritable bowel symptoms were randomly assigned to hypnotherapy, psychotherapy, or placebo conditions. Significant improvements were seen in both treatment groups, but the hypnotherapy patients showed a more dramatic improvement in abdominal pain, abdominal distension, bowel habit, and general wellbeing, with the difference between the two treatments being highly significant. In addition, no relapses were recorded in the hypnotherapy group during the three month follow-up period, and no substitution symptoms were observed. At 18 months follow-up,

all patients treated with hypnosis were still in remission, although two had experienced a relapse which was overcome by an additional session of hypnotherapy (Whorwell, Prior, & Colgan, 1987).

Treatment given by Whorwell et al. (1984) consisted of seven half-hour sessions of hypnotherapy spread over a three-month period. Hypnotherapy was directed at general relaxation and control of intestinal motility. A brief, but not very detailed, description of the hypnotic suggestions is provided by Whorwell et al. (1984). An arm levitation was used as an induction, followed by a combination of deepening techniques, then general comments about improvement of health and wellbeing were made. Attention was then directed towards the control of intestinal smooth muscle “and the patient was asked to place his/her hand on the abdomen, feel a sense of warmth and relate this to asserting control over gut function” (p. 1232). In Session 3, patients were given a tape for daily autohypnosis. All sessions concluded with standard ego-strengthening suggestions.

Similar, although less striking, results to those achieved by Whorwell and coworkers were reported by Harvey, Hinton, Gunary, and Barry (1989) for individual and group hypnotherapy. This study differed from that of Whorwell et al. (1984) in that only four 40-minute sessions of hypnotherapy were given over seven weeks. Nevertheless, 20 out of the 33 people with severe refractory IBS improved, with 11 losing almost all of their symptoms. Improvement was maintained at three months follow-up. The hypnotherapy technique used was similar to that described by Whorwell et al. (1984), but differed in that both individual and group treatments were given by two hypnotherapists, autohypnosis was started earlier, and an eye fixation was used as an induction. In addition to suggesting relaxation and feelings of warmth in the abdomen, patients were asked to “imagine a riverside scene and to relate the slow flow of a calm river to the smooth rhythmic action of their own gastrointestinal tract” (p. 424).

Whorwell et al. (1987) had reported that treatment efficacy for hypnotherapy varied depending on the age of the patient and the nature of the IBS. Treatment was 100% successful in those patients under the age of 50 with classical IBS symptoms (abdominal pain, abdominal distension, and abnormal bowel habit). However, patients over 50 responded poorly (25% response). Patients with atypical symptoms (lacking one or two criteria of the three criteria necessary for a diagnosis of classical IBS) did not respond so well to treatment (43% response) and only 60% of those with classical IBS and comorbid psychological problems responded to treatment.

At the end of this study, Whorwell et al. (1987) concluded that:

1. Hypnotherapy was a very effective treatment for many people under the age of 50 with typical IBS symptoms.
2. "Gut directed" hypnosis was critically important, rather than hypnotherapy of a non-specific nature.
3. Multi-session treatment (e.g., 10 weekly sessions) was recommended before the therapist should conclude that treatment was not working.
4. Relapses could be successfully treated by an additional "booster" session.

Further research by Prior, Colgan, and Whorwell (1990) indicated that patients with diarrhoea-predominant IBS treated with hypnotherapy reported decreases in visceral sensitivity and therefore rectal sensitivity, as well as improvements in wellbeing.

A CRITIQUE OF CONTROLLED PSYCHOLOGICAL TREATMENT TRIALS FOR IBS

Despite the reported success of hypnotherapy for the treatment of IBS by Whorwell et al. (1984), an Australian review of this study and 13 other psychological treatments by Talley, Owen, Boyce, and Patterson (1996) concluded that the efficacy of psychological treatments for IBS had not been convincingly established because of methodological inadequacies. Interestingly, however, Talley et al. also concluded that the only study to exceed the cut-off quality score of 6 (out of eight quality requirements) was the one conducted by Whorwell et al. (1984) using hypnosis.

SUITABILITY FOR HYPNOTIC PROCEDURES

Evelyn was considered to be an appropriate subject for hypnotherapy treatment for IBS as she met the criteria of being young and having typical features of IBS. The Stanford Hypnotic Clinical Scale (SHCS: Morgan & Hilgard, 1978) was used to assess Evelyn's level of hypnotisability and to familiarise her with the hypnotic state in a comfortable environment. She achieved a high score (4/5) of hypnotisability. Evelyn also spoke about her commitment to hypnosis as a means of managing her IBS symptoms and gradually modifying them. She presented as a person who was highly motivated to make an effort with this form of treatment.

INITIAL INTERVIEW AND ASSESSMENT

Clinical History

At the initial interview, a comprehensive history was taken which revealed no significant psychopathology or other health issues. However, Evelyn reported that her IBS symptoms made her feel very uncomfortable and distressed and that since being told she had IBS she had been having sleepless nights (i.e., 4–5 awakenings during the night of about 15–20 minutes duration each). During the daytime she said she felt exhausted. Evelyn had been working as a lawyer for five years, she had been living with her partner of four years and had a supportive family.

Depression Anxiety and Stress Measure

Evelyn's emotional state was evaluated using the Depression Anxiety and Stress Scales (DASS: Lovibond & Lovibond, 1995), an Australian self-report measure which indicated that her stress levels were moderately high (88th percentile), her anxiety score was in the mild range (65th percentile) and her depression score was in the normal range (16th percentile).

Irritable Bowel Symptoms

Evelyn was asked to keep a daily diary similar to that recommended by Whorwell et al. (1984) and this record (using a scale of 0 to 3, where 0 = not at all and 3 = very severe) was maintained throughout treatment. At this pre-treatment time, Evelyn's IBS diary recorded the severity of both her abdominal pain and abdominal distension as an average of 3 for the week. She also indicated that the abnormality of her bowel habits was a 3.

GOALS OF MANAGEMENT

The agreed upon goals for treatment were as follows:

1. To treat the IBS directly by training Evelyn to modify gut motility as suggested in the studies by Whorwell et al. (1984) and Harvey et al. (1989).
2. To modify Evelyn's anxiety levels and sleeping problems through progressive muscle relaxation training. Relaxation training had also been associated with improvements in IBS (Nerf & Blanchard, 1987).

3. To teach a pain management technique (glove anaesthesia) for use in the short term to modify acute abdominal pain until Evelyn had been able to achieve the longer term goal of modifying gut motility.
4. To teach Evelyn self-hypnosis with a focus on three areas: (a) relaxation, (b) modification of gut motility, and (c) abdominal pain management
5. To help Evelyn develop and maintain a sense of optimism and confidence in her ability to manage her own health.

TREATMENT PLAN AND TECHNIQUES

A nine-week treatment plan was discussed with Evelyn and the techniques used by Whorwell et al. (1984) and Harvey et al. (1989) were described to her. Evelyn also discussed seeing a different gastroenterologist (recommended by a friend) and this idea was encouraged, as hypnosis was not seen as a cure for IBS, but rather a way of managing and modifying the symptoms.

As Evelyn’s IBS symptoms were quite severe, she was seen twice a week for two weeks and then weekly for five weeks. The last session in week 9 focused on relapse prevention. The treatment plan is outlined in Table 1. The treatment program evaluation took place on the last session using the DASS and the daily diary of symptoms and degree of severity or abnormality.

Table 1: Outline of Treatment Plan

Week 1	Session 1	Relaxation, ego strengthening, positive healing
	Session 2	IBS treatment — modify intestinal motility
Week 2	Session 3	IBS treatment — modify intestinal motility
	Session 4	IBS treatment — modify intestinal motility Session taped and daily practice at home began
Week 3	Session 5	Pain management — glove anaesthesia Daily home practice using tape — modify intestinal motility
	Session 6	Pain management — glove anaesthesia taped and used as needed Daily home practice using tape — modify intestinal motility
Week 5	Session 7	Self-hypnosis taught for relaxation and pain management (glove anaesthesia)
Week 6	Session 8	Self-hypnosis discussed and reinforced
Week 7	Session 9	A relapse prevention session was conducted using a health related ego strengthening

Session 1

The aims of the first hypnosis session were threefold. The first aim was to help Evelyn experience relaxation which research (Neff & Blanchard, 1987; Whorwell et al., 1984) indicates is an important part of treatment for IBS. The second aim was to use ego strengthening, which Torem (in Hammond, 1990) suggests is a technique that is indicated for all patients who come to the hypnotherapist for health related relief. Third, it was agreed that Evelyn would be better prepared for future sessions by modifying her stress levels, encouraging her sense of self-efficacy, and providing her with positive health related suggestions.

The session commenced by asking Evelyn to begin by taking a few deep, relaxing breaths and asking her to close her eyes and to use her breathing to begin to build an internal focus where she could think about feeling very comfortable. This was followed by a progressive muscle relaxation induction moving from her feet through all major muscle groups up to her face and head. The mind's eye closure (Yapko, 1990) was used to help Evelyn close out intrusive thoughts and to further deepen the trance. Evelyn was then asked to imagine standing at the top of a set of special stairs and to descend the stairs as I counted. It was suggested that she would become more deeply relaxed with each step down (Allen, 1997, p. 19). This was followed by ego strengthening suggestions modified from Torem (1990) which included suggestions about internal harmony, self-efficacy, confidence, and how there was a "centre core" within Evelyn's unconscious mind that wanted her to heal and recover and would help her with this process. Evelyn was then given two post-hypnotic suggestions: one suggesting that later she would be pleasantly surprised about how confident she would feel about her ability to heal herself; and another suggesting that in future sessions she would be able to go into trance more deeply and rapidly. Termination of trance comprised of counting backward from five to one with the suggestion that at the count of one Evelyn would be fully alert and oriented, knowing exactly where she was and feeling relaxed and confident about the future.

After this session, Evelyn said that she felt very relaxed and committed to using the techniques hypnosis had to offer. At the next session she reported having slept well that night. It should be noted that she continued to sleep well from this point onwards throughout the treatment program.

Session 2

The procedure used in this session was adapted from the study by Whorwell et al. (1984), described earlier, which included suggestions for modifying intestinal motility. A script was developed including suggestions from Whorwell's studies, as well as other suggestions found in the hypnosis literature.

Induction into hypnosis began with a progressive muscle relaxation technique, which was followed by the two deepening techniques (mind's eye closure and descending stairs) used during the first session, as Evelyn reported finding these helpful.

The suggestions relating to modifying gut motility were as follows: *and as you continue to relax, each breath soothing you ... you can place your hands gently on your stomach ... that's right ... and notice how your hands gradually begin to feel warm and comfortable ... notice the lovely sensation of the warmth in your hands ... like the feelings of warm gentle sunshine on your hands and as you feel the warmth in your hands you can allow this warmth to soothe and relax the muscles in your stomach ... notice how the warmth of your hands can soothe and smooth the muscles in your stomach ... and you can see the muscles in your stomach loosening ... relaxing ... as if they were guitar strings you were unwinding ... and as you see those muscles in your stomach relax you can feel increased comfort in your stomach.*

The post-hypnotic suggestion given was a modification from Yapko's (1990) script: *and you may be delightfully surprised ... that each time you use this healing technique or each time that you sit quietly with your eyes closed ... your unconscious mind can add a new and interesting dimension to the experience ... and when you recognise ... powerfully within yourself ... how much more control you have than you ever thought possible ... then you can enjoy the feeling of comfort ... and know that you can really heal surprising quickly ... now that more parts of you have begun some work on the job.* The client was counted out of trance in the usual way.

Sessions 3–4

This IBS treatment, designed to modify intestinal motility, was repeated during Sessions 3 and 4 and taped during Session 4 for daily practice. Evelyn reported feeling much better and a weekly summary from her IBS daily diary recorded up to Session 4 revealed that the severity levels of her abdominal pain and distension, as well as the abnormality of her bowel habits, had dropped to 2 (scale of 0–3).

Session 5

As the scores above indicate, Evelyn was reporting improved IBS symptoms, but still had abdominal pain and discomfort. At this stage, it seemed appropriate to provide Evelyn with a technique for modifying abdominal pain when it occurred, while she was also using the tape designed to help modify gut motility, which according to Whorwell et al. (1987) would take a quite a few weeks. Abdominal anaesthesia was not part of the research conducted by Whorwell and colleagues (1987) or Harvey et al. (1989).

The technique of glove anaesthesia was discussed with Evelyn, and after describing different approaches she said she would prefer an approach that focused on warmth rather than cold. Hypnosis was conducted using the *early learning set* induction (South, 1999a) where Evelyn was encouraged to imagine her successful early learning experiences at school and how *you had to learn the alphabet. And looking at all those letters seemed to be an insurmountable task. And you had to learn the difference between an A and a B, a B from a D, and an M from a W and a P from a Q, as well as upper and lower case letters. But you learned them by creating mental images of these letters in your mind ... and that has been permanent learning that has stayed with you. All your life. And you can learn other things like how to solve problems* (pp. 203–204). This was followed by a counting deepening technique (adapted from Hartland, 1971).

The glove anaesthesia technique was a modification of suggestions from Kroger (1990) and South (1999b). Evelyn was asked to place her hands on her abdomen and to concentrate on her right hand; and as she did so, it was suggested that a feeling of heaviness would begin to develop. As she continued to focus on that heaviness and as I stroked her hand (this physical contact was foreshadowed and agreed to before commencing hypnotherapy) she would begin to notice a numbness developing. This numbness and anaesthesia would begin to spread through her entire hand and deepen more and more. These suggestions were continued until she was told that her hand would begin to go to sleep and her hand would no longer feel part of her. The suggestions from South (1999b) then focused on transferring the numbness from Evelyn's right hand onto her left hand until both hands felt completely numb. When this was achieved, Evelyn was asked to spread the numbness from her hands into her abdomen and feel the numbness spread across her stomach, penetrating deeper and deeper.

The post-hypnotic suggestion included instructions for Evelyn to allow her abdomen to remain numb even when she became alert and that she would

enjoy these good feelings for the rest of the day and while she was asleep that night, and awoken in the morning with her abdomen still in trance, for as long as her unconscious mind deemed appropriate and as long as her body warranted these good feelings. The client was brought out of trance using the normal reverse counting method.

Session 6

Evelyn reported finding that glove anaesthesia was very helpful and said that she would prefer to use this pain management technique, rather than the hypnotic suggestions relating to gut motility. At this stage it was suggested that Evelyn use both, as it was still important to continue focusing on modifying gut motility. Evelyn reported feeling much better and a weekly summary from her IBS daily diary recorded up to that session revealed that the abdominal pain and distension ratings were down to 1.5 and the bowel habit concern was at 2.

Sessions 7, 8, and 9

In Session 7, Evelyn was taught self-hypnosis so that she could use relaxation strategies, glove anaesthesia, and suggestions to modify gut motility quickly and efficiently whenever needed. Any problems with self-hypnosis or the other approaches were discussed in Session 8. In Session 9, which was the last session, the focus was on relapse prevention and a health related ego strengthening was used.

At the end of treatment, Evelyn was still experiencing mild IBS symptoms, and rated herself as 1 for abdominal pain and distension, while bowel habits abnormality was still rated as a 2. However, she felt that she could now continue to manage these symptoms herself, with the tapes and self-hypnosis strategies. In addition, Evelyn's anxiety and stress scores were now in the normal range (see Table 2).

Table 2: Depression, Anxiety, and Stress (DASS) Scores at Pre- and Post-Test

	Pre-test	Percentile	Post-test	Percentile
Depression	Normal	16	No change	14
Anxiety	Mild	65	Normal	54
Stress	Mod. high	88	Normal	59

Six Month Follow-Up

Evelyn was contacted by telephone six months later and she reported that she was not taking medication and on the whole was managing well, although she still had some bad days (abdominal pain, bloating, and diarrhoea). She said she still used hypnotic techniques, but on the whole tried not to think about having IBS at all.

Evelyn had changed her lifestyle and was walking and swimming regularly and being careful about what she ate and drank. She had also modified her working conditions and was less stressed and worked shorter hours. Evelyn also reported seeking a second opinion on IBS from a different gastroenterologist, partly because she wanted to be monitored by a medical specialist and also partly because her general practitioner said he did not think she had IBS. Evelyn said this second specialist was very helpful and confirmed the diagnosis of IBS. He was willing to answer her questions about IBS and also suggested that she experiment with taking a “bulking” agent to help modify diarrhoea which still persisted.

DISCUSSION AND CONCLUSION

Hypnosis in this case was a successful treatment to control, not cure, IBS for several reasons. First, hypnotherapy offered Evelyn hope, after she had reported that her first gastroenterologist told her that there was nothing she could do. This sense of powerlessness and associated anxiety was a major issue for Evelyn, as she was an intelligent, professional woman with a proactive approach to life. Second, hypnotherapy induced an immediate sense of relaxation and restored her sleeping ability, which reinforced the positive benefits of this form of treatment. Third, Evelyn was a very motivated client and worked conscientiously at practising the strategies and mastering the techniques. Finally, the pain management technique gave Evelyn a sense of personal control and therefore enhanced self-efficacy which reportedly helped to modify her stress.

One possible limitation of this case study was not having ready access to the types of hypnotic suggestions used in the published research to modify gut motility. As mentioned, only a brief description had been published in the studies by Whorwell and coworkers. Since completing this case, however, copies of scripts entitled “Gut-Directed Therapy (for IBS)” have been obtained from Whorwell and colleagues at the University Hospital of South Manchester. These suggestions focus on modifying gut motility and are a few minutes

longer in duration than the suggestions used in this case. Therefore, it is possible that this additional focus on modifying gut motility may have been more helpful to Evelyn than the shorter version used in this case.

Since this case was conducted, research has increased substantially on the effectiveness of hypnosis for the treatment of IBS (e.g., Gonsalkorale, Miller, Afzal, & Whorwell, 2003; Gonsalkorale, Toner, & Whorwell, 2004; Lea et al., 2003). For an up-to-date listing see Palsson (2004).

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SCRIPTS

“SPECIAL PLACE OF BLISS” IMAGERY: A SCRIPT FOR FACILITATING PROBLEM SOLVING

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There are several previously published “special place” hypnotic scripts. Each has minor variations on the general theme of creating such a place for someone to use when in trance. Beginners to hypnosis often use these prepared scripts, as they are helpful and easy for a novice to read, rather than to run out of ideas and come to an embarrassing and sudden stop during a session. They generally contain very positive and helpful ego-strengthening suggestions. Most of these special place scripts aim to be soothing and comforting, so that they effectively provide a place of emotional rest, safety, and tranquility.

The following script, the Special Place of Bliss, is the standard generic version of a special place imagery that I commonly use. Perhaps, most often, it is used with a patient in the second or third hypnosis session. It is a generic hypnotic exercise and is structurally and contextually non-specific to any particular type of problem. Because of the non-specificity of this type of script, it often works well with a surprisingly wide range of presenting problems. This exercise can also address and powerfully deal with, and resolve, other problems, sometimes those that are much more significant than the presenting problem, and that may not even have been articulated or identified by the patient. The SPB script as described herein is designed to go far beyond the conventional use of a simple “special place” and has additional potential psychotherapeutic benefits beyond just being a simple place of safety and relaxation. The promise that

Details of the overall hypnosis sessions, in which such a script is embedded, are available from the author at www.medicalhypnosis.co.nz.

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underlies this exercise is that it enables each listener to put all of their unique worries and problems off to one side and experience a genuine “state of bliss.”

The basic wording and structure of the script is initially given and some of the key hypnotic elements are highlighted. The emphasis in this publication is not on the whole hypnosis session. Rather, it focuses on the script per se.

Special Place of Bliss

After the induction of trance and the deepening of trance has occurred, then the use of the script begins:

Today I'd like to teach you how to experience your very own unique special place of bliss. I'd like you to imagine a corridor. As you walk along the corridor there are doors leading off to the left and to the right. And at the end of the corridor is a door. A very inviting sort of door. You can decide for yourself the size and shape of the door.

Tell me, what colour is the door?

Is the door a plain door or does it have panels?

Does the door have a handle or not?

Is the handle on the left or on the right?

Now look very closely, does the door seem to open inwards or outwards?

(Answering these questions establishes that the subject is actively visualising a particular door. Do NOT proceed until the subject can confidently do so.)

You may be wondering about this door. About what lies behind the door? In a few minutes you will discover that behind the door is a special place. Your very own special place. A place that your imagination is already creating for you. It is a special place. A place of bliss. Absolute bliss! Now bliss is an old-fashioned word. It's not used much nowadays. Let me be quite clear about what I mean by bliss. Bliss is a state of mind. Bliss is far more than just the absence of negativities. The absence of worries, the absence of problems, concerns, difficulties, traumas and upsets. Bliss is more than that. As well as the absence of negativities, bliss is also about the positive presence of such concepts as freedom, peace, comfort, joy, happiness, relaxation, and rest. Absolute pleasure ... sheer ... bliss.

So, in order to experience a sense of bliss, then we have to, at least on a temporary basis, be able to put all of our problems and worries and concerns off to one side. So, on your back you will find a backpack. Now take the backpack off and place it in front of you. Open the backpack. Inside you will find a collection of stones. Special stones. Notice how the stones are somewhat flat, but rounded and smooth, rather like the sort of stones

you might find on the bed of a river ... Do you see the special stones? [Wait for confirmation.]

These stones are special because in hypnosis they are very symbolic. The stones represent all of your particular problems. Every problem. Every concern.

And because these stones represent every problem, not just the ones that you have told me about, I want to make one thing very clear. This next part of the exercise will be carried out in total and absolute privacy. Now by total and absolute privacy, I don't simply mean the normal confidentiality that you would expect and will of course receive from a health professional. No, I mean far more than that. By total and absolute privacy I mean that you will do the next part of the exercise entirely inside your own head, in silence. So that only you will ever know what particular issues these stones represent for you. Let me be absolutely clear. I will never, ever, ask you to talk about the meaning of your stones. Only you will ever know how many stones are in the backpack. Again I will never, ever, ask you to talk about the number of stones. And perhaps most importantly of all, only you will ever know the weight of each particular stone. Obviously the weight of the stones relates to the weight of the problems. Again, I will never, ever, ask you to talk about the weight of any of the stones. Is that guarantee of privacy completely understood? [Wait for confirmation.]

These stones represent all of the problems that you have in your mind. There are the problems of now, the present. The issues and concerns that are on your mind now, today, this very day. But there are also stones about the past. And the past includes yesterday, last week, last month, last year, ten years ago, or even many years ago. All the way back to your earliest memories of problems from childhood. And there can also be stones from the future. How can this be, since the future hasn't happened yet? Well, these are what I call the "What if?" stones. Some people carry around stones that represent worries about what might happen in the future. What could go wrong. What might not change? Sometimes these stones are possibilities. Sometimes remote possibilities. But some people carry them around like rocks of probabilities. Or even as huge boulders of certainties. Your imagination will tell you what size each stone and issue is.

Now look at the stones in the backpack. Now this is what I want you to do. In a few moments, I will give you the signal to start emptying the backpack. This is how I want you to empty it. In a moment, I want to you look at the top stone. It will probably have a label on it. To let you know what problem it represents. I want you to read the label and to identify the problem. Then, briefly, feel the weight of the stone and then place it down on the floor beside the door. Then turn to the backpack and identify the next stone, feel the weight of that stone and then put it down beside the door. Keep doing this till the backpack is completely empty. Then, when you have taken the time you need to completely empty your backpack, you can let me know that it is empty by

raising your right thumb in the air. Are those instructions clear? [Wait for confirmation.]

Then turn to the backpack and now start unloading all your problems ... stone by stone ... issue by issue ... problem by problem ... till the bag is completely empty. Take all the time you need.

Give the person time to empty their stones. A few useful interjections every so often can be helpful; for example,:

Some of the stones are the ones you expected to find there. Others might be a bit of a surprise.

Some of the stones may be heavier than you had expected. Some may be surprisingly light.

Some of the stones may have been there for a long time.

Some problems can have three stones. One for the past, how you used to feel about the problem. One for how it affects you now. And one for the future about anxieties you might have about what it may be like in the future.

Take your time. Take all the time you need.

Stone by stone.

Some stones may have lost their labels. It may be hard to remember what those stones represent. But they still have weight, so take them out and put them down by the door.

Some people have lots of stones. Others have only a few.

Some people collect pebbles. Each pebble is small. Not very heavy. But a lot of pebbles together can add up to a lot of weight. Each pebble is too small for a label. Too time-consuming to unload individually. So you can just tip any pebbles out at the end.

You can just raise your thumb when the backpack is emptied.

When the thumb eventually rises, then proceed to the next phase:

Now turn to the door. Put your hand on the handle and go through the doorway into your special place. The door closes behind you. Feel the sense of bliss in this special place. Feel the sense of freedom. Look around at the place in which you find yourself. Can you describe this place to me?

Utilize whatever imagery is reported and interpret it in the most blissful way. Let the person spend a few minutes experiencing a sense of blissfulness.

Now go back to the door and leave your special place of bliss. You can always go back there. Perhaps go there to experience bliss every day. I like to start my day with experiencing a few moments of bliss.

Now look at the stones lying beside the door. These stones represent all your problems. Past, present, and even future. Only you know what these stones represent. Only you know how many stones there are. At this point, you might like me to wave a magic wand and make all the problems disappear. But that's not possible. That would be fantasy. This is reality. And you know that, in reality, there are some things that cannot change. You cannot change the past. You cannot change one minute of the past. Not even one second of the past. In the same way, you cannot change the stones. You cannot change the size, the shape, the colour, the texture or the number of stones. These cannot be changed. But there is one really important change that you can make. It is so simple, yet it can be so awesome.

You can change the location of the stones.

If you want, for some or even for all of the stones, you could choose to leave the stones lying there. They would still be the same size, shape, colour and texture as before. But if you left the problem lying there, on the floor, you would not be able to feel the weight any more. This would turn the problem into a technicality. Just a mere technicality. You wouldn't be able to experience the feeling of weight any more ... Does that make sense?

Wait for confirmation and give clarification if needed.

On the other hand, if for whatever reason you feel a need to carry some or even all of the stones as a burden then feel free to pick up those stones and put them in the backpack. To experience the problems as a burden, you need to be able to feel the weight of the problem ... Does that make sense?

Can you appreciate the difference between a burden and a technicality? Then carefully make your choice for each stone. You don't have to decide for the rest of your life. Just for today. Are there any stones that you don't need to carry as a burden for the rest of today. If so, you can leave them there. It's quite safe. These are flat stones. They won't roll away. They will still be the same problems. They will still have the same size, the same shape, the same texture, the same colour. But you can now choose whether to carry the weight. You cannot change your problems. But you can choose whether to regard them as burdens or as technicalities ... Take your time and choose. It's awesome ... When you have made your choice for the location of each stone, again in absolute privacy, then you can let me know by raising your thumb once more. [Wait till thumb rises.]

Now put the backpack on your back and start walking along the corridor. See the doors to the right and the left. And on the floor you may see some stones. Some people are what I call "habitual stone picker-uppers." No one is a born stone picker-upper. You have to learn it. Usually you learn it from a parent. Nine times out of 10, it's a mother stone picker-upper you learned it from. " Oh, there's a stone. Be a good boy/girl and

pick it up.” Lots of messages about “ought to” and “should.” I’m sure you know what I mean by that. I’ve got a mother like that. Many of us have mothers like that.

But some people, with a lot of stones, are not habitual stone picker-uppers. They are usually very generous people. Warm hearted and giving. They sometimes leave their backpacks wide open and this allows other people or events, but particularly other people, to dump some of their stones in our backpack. And I’m sure you know what I mean by that.

I got the idea for this exercise from a song that was popular in the ’60s called “Turn! Turn! Turn!” You might remember the song. Several groups sang it. The Byrds, the Seekers. “There is a season (turn, turn, tur), and a time for every purpose under Heaven ...”

There is a line in the second verse of the song that says “A time for laying down of stones, a time to gather stones together.” It suddenly occurred to me that “stone gatherers” was a fairly good way of describing the people who come here with all sorts of problems that they have accumulated over the years. Some have become quite skilled and seasoned stone gatherers. But it’s as if they have forgotten the first part of the verse. There’s a time for laying down of stones! I wanted to write to the Byrds to thank them for the inspiration for this idea, till someone pointed out that they didn’t write the words. They used them. The words of the song were not written in the ’60s, but in fact come from the Bible. These words are taken from the Book of Ecclesiastes.

Now I don’t know what the original writer meant by those words, but I think the original writer would be happy with your modern day use of these words. You can choose when it is your time to lay down your stones. Each day you can lay down your stones and experience your special place of bliss. Each day you can choose the location of your stones. Even if you feel obliged to pick them all up again you can still be refreshed by spending time in the place of bliss. Some days you may be able to leave all the stones lying on the floor as mere technicalities. On those days you can then start your day with a clear mind. You can repeat this exercise in your own time as often as you wish. I like to do it each morning. Each time will be different. You will learn something new each time you do. I do this exercise each morning in the shower. My special place of bliss has a hot waterfall that I stand in. I literally and mentally wash off the dirt from yesterday from my skin. I put on a clean shirt, a clean mind and start each day feeling blissful.

You know, this exercise reminds me of an old joke in real estate. What are the three most important factors in real estate? They are “location, location and location.” It is not the meaning of the stone that is most important. It is not the size or the shape or the number. It is not even the weight of the stones. The three most important factors in determining whether any problem, any stone, is an intolerable burden or just a mere technicality are “location, location and location.”

You can start each day with a sense of bliss. You can lay down your stones. In so doing, you can convert your burdens into technicalities. But for now, just gradually reorient yourself to this room and to this time. Hear the noises around you more clearly and when you are ready, just gradually open your eyes and come out of trance.

REVIEWS

101 Healing Stories for Kids and Teen: Using Metaphors in Therapy

George W. Burns

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Those of you who have the opportunity to attend any of the workshops or seminars conducted by George Burns will know that this man is a very good teacher and a great artist when it comes to utilising metaphors in hypnosis-based therapy. This talent for teaching is immediately evident in his new book on healing stories for children. This book is not only for hypnotists, but for therapists in general and parents who like to “spin a yarn.”

The three-part (17 chapters) book is carefully structured so that in Part I, the reader is educated about the role of storytelling in the healing process: how stories inform, educate, teach values, discipline, build experience, and facilitate problem solving and how they change and heal. He even sets exercises for readers to stretch their capabilities comfortably.

Here we have a book for therapy which is not about the passive use of metaphors in healing, but the very active engagement in storytelling where both the therapist and client are fully involved and entranced.

Having set the scene for the power of storytelling, Burns then begins to equip the eager learner (eager, because if you are reading this review, then you are already very interested in the use of stories for healing and perhaps for adults as well as children) with the necessary guidelines for effective storytelling, including the importance of changing one’s voice and manner to that of a storyteller, and knowing when to speak and when to be silent to deepen the process of absorption.

Burns then makes sure that the apprentice storyteller knows where he or she can source materials for stories — and these are many: books, drama, videos and DVDs. He then begins to describe the theatrical props that one might want to add to the scene, such as puppets, dolls and toys. In the chapter on tools and techniques, he analyses how metaphors can be seen as play and

humour, and how the therapist can make use of experience and child-generated metaphors, as well as how tales can become collaborative by interacting with the client.

In Part II, the next 10 chapters are structured in an easy to use manner, especially if one wants to find a specific story for a special problem or issue in treatment. These chapters cover enriching learning, caring for yourself, changing patterns of behaviour, managing relationships, managing emotions, creating helpful thoughts, developing life skills, building problem-solving skills, managing life's challenging times, and healing stories from kids themselves.

So now that you have been given many actual examples of how the stories sound and play out, in Part III Burns shows you how to create your own stories for those therapists who enjoy working with metaphors and those who also like to play as well. The skilled teacher warns us of potential pitfalls as well as demonstrating potential pathways in metaphor therapies. The book then outlines where a therapist can obtain ideas for stories, how to plan and actually present them in therapy, and in addition teaches parents to use appropriate stories. Then, if that is not enough, there is a list of resources at the end of the book for further exploration.

If we are to follow Burns's methodology, we should be able to put this book to the test with some problem-based teaching scenarios. So let us pose three possible case studies, where it may be possible to utilise metaphors in therapy for children and teenagers.

Children and adults have a deep need for stories; it is food for the soul and the psyche.

Case Scenario One is about a 6-year-old boy who is in hospital with leukaemia and is feeling very lonely, as he has come to the city from the country. He is not responding well to the treatment and the doctors and nurses think that his state of mind is holding him back. You, as the hypnotist, have already met Harry, and as you walk past his bed you ask him, "Have you seen the movie *A Bug's Life*?"; you hear a grunt, and then ask *Babe*? and then Harry's eyes light up and you keep up your sleeve the *Harry Potter* series (p. 35). You have been instructed by Burns that Harry is likely to understand at an unconscious level that *A Bug's Life* addresses intimidation and self-doubts, and that in terms of resources it helps children build on their strengths and cope with challenges, thus leading the child to courage and leadership. *Babe* also deals with issues of self-doubt and uncertainty, accepting support and persistence, and belief in one's self, and its main outcome is concerned with

winning against the odds. Wow, so you move into your engrossing storytelling mode and the child joins in.

Case Scenario Two is about a 16-year old-girl, Mary, whose hearing problems have reached a point where she has lost 80% hearing in both ears. You have heard of AUSlan, and with her permission you call in an AUSlan interpreter to work with you on a story that you have designed especially for her (chapters15 and16).

Unexpectedly, the whole ward of children has gathered around you as you tell these stories; attracted by the pantomime and explicit signing of the stories, the children are fascinated by the sights and sounds of the story told by you and acted out by the AUSlan interpreter. Suddenly the girl is not alone anymore. She has made friends amongst the children, who are keen to learn signing, and the interpreter makes connections for her with groups of people who use AUSlan. Thus a window of opportunity opens up for Mary: Where before she thought her life was closing in on her, she has now become a leader in the group, as the other children consider she must have a lot of power to organise such a display.

Case Scenario Three involves an older teenage boy who has just been told that he has MS. You do not have the energy that day to create your own story, although you would like to be able to do so, so you consult Burns's book and after gently relaxing the boy and using a modified Hartland's ego-strengthening technique, you draw on the stories in Part II of the book: Story 30, "I'm Not Afraid Anymore"; Story 22, "Facing Fears"; Story 52, "Managing Grief"; Story 64, "Sometimes Terrible Things Happen"; Story 72, "Overcoming Adversity"; and Story 98, "Rock Your Way Out of It". Because he is a mature boy, you construct the script in a manner which is age appropriate, so that he can be a man.

As the reviewer, I rest my case(s). If you love stories or metaphors, or work with children, or adults in pain or loss situations, then this book is a great addition to your library. However, for regular use you might want to convince the publishers to produce a hard cover version, as my copy is already dog-eared.

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Yoga Nidra: Yogic Trance, Theory, Practice and Applications

N. C. Panda

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Panda's book provides a history of the practice of yoga nidra that adds to the knowledge base of clinicians utilising this practice in service delivery, and of the researcher preparing a literature review to compare trance states in both the East and West. The book is divided into four sections or parts.

Part One: The Origins of Yoga Nidra

In Part One, Panda discusses the theory of yoga nidra. He traces the practice of modern yoga nidra back to Hindu mythology and explains the metaphors of Vishnu, sustainer of the universe, who is said to live in the yoga nidra state.

The State – Non State Debate Panda compares and contrasts the state of yoga nidra and that of hypnotic trance. He offers a brief history of trance from the period of Mesmer to the present, when hypnosis has become a respected field of scientific enquiry.

Panda associates hypnosis with a state of altered consciousness. He draws attention to the challenge levelled at state theory provided by Sarbin and his associates (Sarbin, 1950; Sarbin & Coe, 1972) with role enactment theory. He comments that T. X. Barber (1969) is another theorist who believes that hypnotic behaviours can be accounted for by the usual principles of behavioural and cognitive psychology.

Panda, however, does not expand further on other theorists contributing to the state/non-state debate or examine the logic underlying these differing theoretical stances as Sheehan does in his textbook, *Methodologies of Hypnosis* (1976). In this text, Sheehan examines the logic underlying differing theoretical assumptions about hypnotic behaviour and discusses the differing perspectives, as they relate to empirical methodologies for exploring hypnotic behaviour and phenomena. Sheehan draws out the utility of Endler and Magnusson's interactional model of psychology and personality (1976) to highlight a major theme that emerges from hypnotic literature, that is, that individuals seem to be actively engaged in variable ways in processing and responding to suggestions that they receive.

Few concepts had been introduced into the hypnosis literature to attempt to structure the patterns of individual variation in hypnotic performance

before the development and application of Sheehan and McConkey experiential analysis technique (EAT) (1982). Modelled on an interactional psychology perspective, EAT is a phenomenological assessment tool which reflects the specific techniques or strategies adopted by subjects in moving toward positive hypnotic responses; structures it usefully within the concept of cognitive style; and explores both the process and phenomena of hypnotic interaction. Research studies applying the EAT methodology include Sheehan, McConkey, and Cross (1978) in a counselling context, and Jackson and Sheehan (1986), who captured the essential variability of hypnotic response as subjects undertook tasks on the Stanford Hypnotic and Profile Scales.

Methodologies for Process Research Along the Stream of Consciousness The discussion above on debate and methodological issues engendered in the domain of hypnosis becomes particularly relevant as Panda offers the opinion that, while altered consciousness seems to be common in both hypnosis and yoga nidra, these two states of altered consciousness are not identical. He offers by way of explanation that hypnosis in general involves two persons – namely, the hypnotist and the client or the subject – whereas yoga nidra, being an autosuggestive procedure, involves only one person.

The Hidden Observer Panda also comments on Ernest Hilgard's use of the expression "hidden observer" (1973, 1977) as a metaphor to describe a concealed entity who knows things that are not present in the person's open consciousness. Panda is of the strong conviction that the "hidden observer" of Hilgard is not different from what is referred to as the "self" (Sanskrit term *atma*) in the context of yoga nidra. Panda offers a brief and useful outline of the four states of the "self," that is, (a) the waking state (*jagrata*), (b) the dream state (*svapna*), (c) the state of deep sleep (*susupti*), and (4) *turiya* (where one cognises neither the internal impressions nor the external objects). He considers that the Samadhi state in yoga corresponds to the fourth state, *turiya*.

Process Research Along the Stream of Consciousness With the connection made by Panda between hypnotic trance and yogic trance, the experiential analysis technique of Sheehan and McConkey (1982), developed in the domain of hypnosis, offers important and practical utility and opportunity for process research within the domain of yoga and meditation. It offers a methodology to explore process and phenomena in trance states across cultures, to compare and contrast strategies to shift awareness (*nyasas*), and to develop attentional

control. As pointed out by Clarke and Jackson (1983), attentional control is the essential component for tapping fully into the hypnotic experience. As pointed out by Pope and Singer (1978): “The stream of consciousness, that flow of perceptions, purposeful thoughts, fragmentary images, distant recollections, bodily sensations, emotions, plans, wishes, and impossible fantasies, is our experience of life, our own personal life, from its beginning to its end” (p. 2).

The EAT provides us with a process research that attempts to “navigate and map” the streams of consciousness facilitated by 4,000 years of experiential enquiry, from the Vedic age up to the present, with strategies designed for personal development and realisation of the “self” (Feuerstein, 2003). The EAT offers huge potential to make a contribution to what Ballentine (1999) calls a comprehensive vision of health care that brings together the various holistic schools of healing, integrating their insights and skills.

Phenomena are acknowledged in hypnotic trance with relevance to the timing of delivery of suggestion after disengagement (Kroger & Fezler, 1976). Phenomena are recognised and discussed in yogic trance under the term *siddhis* and *riddhis*. A textbook on this subject written by a medical practitioner is shortly to be released. The EAT, as a tool for phenomenological assessment, facilitates exploration of phenomena in hypnotic trance and yogic trance.

The methodology also allows exploration and assessment of the important dimensions of rapport with the person who is initially teaching a beginner yoga nidra. Kroger (1977) alerts us to the idea that “what is important is not the depth of the trance but the degree of rapport and emotional participation by the patient (or client).” Kroger repeatedly indicates that the therapist only “sets the stage” and that ultimately it is the patient (or client) who permits the hypnotic relationship to develop by selective attention (p. viii). Research facilitated by the EAT on rapport with the instructor delivering yoga nidra will be extremely interesting when subjects are practitioners of lineage styles of yogic trance to explore the interaction of, and impact on trance behaviour, of a “relationship with Guru.”

Mind and Theories of Personality East and West Panda moves from a comparison between hypnotic trance and yogic trance to briefly review Mind from a Western historical perspective, and from the ancient Vedic view that also emphasises a mind–matter influence and vice versa.

Discussion by Panda of the ancient “energy model of consciousness” and the primary channels of conceptualised energy flow in the terminology of “network of rivers and rivulets” addresses concepts and strategies built on and

used by Ernest Rossi in his therapeutic trance and psychobiology of mind-body healing model (1993, 1996). The discussion of similar concepts by both authors may be useful to the clinician interested in ultradian cycles of outgoing and ingoing flows of consciousness, and the relationship of these natural ultradian rhythms to trance readiness (Rossi, 1982). Rossi (1983) makes skilful integration of swara yoga techniques as *nyasas* or strategies to shift awareness in his Ericksonian based trance work.

Part One draws to a close with a review of personality theory from Vedanta psychology, which is contrasted with yoga and Sankhya psychology, and a discussion of the Freudian mind as distinct from the yoga-Vedanta mind.

Panda uses the last seven pages of Part One to introduce the induction technique for yoga nidra. He touches on the use of *sankalpa* (resolve) in yoga nidra, which is planned and mentally stated before induction, and repeated in trance after disengagement (or negation of consciousness in yogic relaxation terminology). Resolve might be considered as the yogic trance equivalent of preplanning for suggestion that is given in trance. The term *sankalpa* is usually associated with a more long-term and deeply meaningful suggestion or goal reinforcing statement into which the client gains insights of as he or she practises the technique over time.

Part Two

In Part Two Panda deals with the practice of yoga nidra without any direct reference to its theory. He outlines suitable times for practice, preliminary exercises and preliminary yoga breathing practices to facilitate the yoga nidra state, and provides steps in the sequence of yoga nidra techniques.

Panda advises that his step-by-step procedure is designed to enable the practitioner to follow the techniques without the guidance or assistance of a second person or instructor. He is of the opinion that the practitioner can undertake the practice of yoga nidra without taking help of an instructor, although he does acknowledge that some yoga nidra teachers recommend the guidance of an instructor for beginners.

Yoga Nidra Techniques to Shift Awareness Panda emphasises that the techniques for shifting awareness (*nyasa*) from one spot to another, from one idea to another, and from one form of imagery to another have their origin in the ancient science of Tantra. In the Prologue to his book, Panda acknowledges Swami Satyananda Saraswati of the Bihar School of Yoga as the person who has popularised yoga nidra and published books on the topic. Indeed, it can be

said that yoga nidra is recognised in the yoga community as a hallmark in the tradition of Satyananda Saraswati (Niranjanan Saraswati, 1998). Satyananda Saraswati holds an international reputation as the master technician of Pratyahara, the fifth limb in Patanjali's eight limbs of yoga (Rammurti Mishra, 1972). He is acknowledged as the person who discovered this technique in the process of revising Tantric texts. Recognising the need for such a practice in the modern world, he devised a simple and effective form of yoga nidra, with systematic stages of development of the practice, that is suitable for everyday use. He commenced using the practice in 1962, and the practices presented in the first edition of *Yoga Nidra* evolved from this time.

In the first edition of *Yoga Nidra* Satyananda (1976) also states, as does Panda, that yoga nidra is a meditation technique that is part of the Tantric tradition. Satyananda adds that in the ancient texts or Tantra shastras it is known as *nyasa*, a complex and time-consuming procedure involving knowledge of mantras, chakras, and the Sanskrit alphabet.

Books on yoga nidra and meditations from the Tantras in the Satyananda Saraswati tradition are readily available in Australia (Saraswati & Saraswati, 1983). Due to the availability and popularity of Satyananda's adapted yoga nidra amongst clinicians, yoga teachers, and students, it is likely that most delivery in Australia today of yoga nidra draws from his adapted formats. The Australian Society of Hypnosis has also offered an interactive workshop that explored yoga nidra strategies to shift awareness at their Alice Springs, Northern Territory, Congress. I presented yoga nidra strategies in the Satyananda format as part of a workshop in association with Dr Wendy-Louise Walker at this ASH Congress.

A Comparison of Yoga Nidra Scripts It is of interest, therefore, to both clinicians and practitioners using Satyananda's "rotation of consciousness" techniques to shift awareness, to read Panda's scripts in Chapter 2 for external and internal shifting of consciousness, and his detailed scripts for two types of Tantric nyasa in Part Four of his book. Panda affords us the opportunity to compare the traditional type of yoga nidra practices with the adaptation and development of the modern application for which Satyananda Saraswati of Bihar, India, is renowned.

Elmer and Alyce Green's (1977) work at the Menninger Foundation with Swami Rama offers another opportunity to examine Tantric nyasa's techniques for shifting awareness. Swami Rama submitted himself as a research subject to scientifically explore the validity of yogic techniques. Findings from these

studies gave researchers much insight into the nature of the involuntary systems of the body and how they might be regulated voluntarily by other people as well. This work has been one of the major cornerstones of the mind–body movement of the past few decades. The Greens documented that Swami Rama called his strategy to shift awareness “travelling through the body.” The process involved a person lying on the floor. Swami Rama touched with a yardstick the body areas numbered sequentially, allowing about 15 seconds between points. As Rama touched each spot he said the corresponding number. The process was carried out verbally, then mentally. The pathway and points for “rotation of consciousness” used by Swami Rama are provided in figure form in Green and Green’s textbook.

Research Findings on the Efficacy of Tantric Nyasa Green and Green (1977) reported that of particular interest to his researchers was the fact that, over a period of five months in which his theta pilot group practised this procedure, amongst others, for ten days per month, or more if they desired, there was a significant increase in the amount of theta production from the occipital cortex during these “travels.”

In 1984, Pollard reported that in her study, one group of subjects trained in the yoga nidra tradition of Satyananda Saraswati was compared with several other groups trained in meditation techniques from other traditions. Pollard reported extremely favourably on the capacity of yoga nidra in the Satyananda tradition to lower heart rate, such that the yoga nidra group became the baseline against which the other groups were compared.

The Technique of Rotating Visualisation Towards the end of Part Two Panda outlines the technique of rotating visualisation, or moving visualisation of scenarios. This section might also be usefully conceptualised as the technique of shifting awareness through rapid image visualisation. When we overview the process or sequential flow of yoga strategies, with particular reference to use of imagery, in chapters 7 to 9 of Dean Ornish’s 1990 textbook outlining his program for reversing heart disorder, one can recognise a similarity in yoga processes toward disengagement of Satyananda and Panda. In the acknowledgments section in his textbook, Ornish recorded that, in 1972, Swami Satchidananda Saraswati (now deceased) began teaching him the meditation and yoga techniques that evolved into his stress management program of chapters 7 to 9.

Swami Satchidananda Saraswati and Swami Satyananda Saraswati were both trained in yoga and meditation by the internationally respected medical

practitioner Swami Shivananda of Rishikesh in the Himalayas. Shivananda's work brought yoga strategies out from the more private ashram gurukul system into everyday use for health purposes. It is not surprising, therefore, that two of his students, world yoga leaders in their own right, have taught a very similar process of disengagement via attentional control and that they continued their teacher's direction of interpreting yoga and meditation techniques for everyday use and mind-body wellness.

Management of Cultural Images in Yoga Nidra Scripts Here again, Panda offers us opportunity, in his provision of yoga nidra scripts, to view the traditional images of yoga nidra, some of which we might consider are more familiar to individuals with a background of Indian cultural heritage. (In the early 1970s, I spent two years studying in India. During this period I had the privilege of being given the job by Satyananda Saraswati of transcribing drafts of his taped lectures for the first editions of the *Yoga Nidra* [1976] and prana vidya publications by the Bihar School of Yoga.) The second methodology, prana vidya, now in a revised publication (Niranjananda Saraswati, 1998) in association with prana dyana, has much to offer clinicians and researchers interested in control and intensity of imagery, and what are popularly called "healing visualisations."

(In this transcription work I had the opportunity to meet with Satyananda Saraswati on a regular basis for review of the drafts in preparation. I asked him about the use of Indian cultural heritage type images with individuals without such a background. Satyananda advised me that it was acceptable to change images to those more in character with a client's experience of the world, but not to change the process. He explained that the rapid imagery section in yoga nidra was there to assess whether yogic relaxation, or negation of consciousness, had been completed. At this time, the disengagement process or negation of consciousness process could stop, so that the next stage, expansion of consciousness through focused attention [dharana] could be initiated. In the rapid imagery stage, the image is to come spontaneously within a few seconds of delivery by the practitioner or instructor. If this is not the case, the process of disengagement, or negation of consciousness continues.)

Yoga Nidra from an Academic Depth Psychology Perspective Panda offers one practice script for yoga nidra in Part Two. He emphasises that his present book is not a duplicate of the Satyananda Saraswati writings that provide many scripts for practical use. Panda emphasises that his focus is on academic depth psychology, and the applications of yoga nidra with special reference to medical science.

Part Three

In Part Three Panda explains that yoga nidra is a self-regulation practice with the potential for a diverse range of applications in health care settings. He points out that while the general processes of yoga nidra toward disengagement are the same, the resolves (or goal reinforcing self-statements) are different. Panda's comments on two processes in yogic trance remind us of Clarke and Jackson's emphasis in their 1983 textbook that hypnosis involves two processes, disengagement and suggestion.

Panda details a wide range of health conditions where clinicians may employ yoga. He points out that healing of body and mind through yoga is gaining immense significance at present as a worldwide science of therapy. He emphasises that yoga nidra is a potent means of strengthening the body's immune system and regulating one's life patterns.

Panda deals with the applications of yoga nidra in relation to management of psychosomatic and other disorders of common occurrence, drug addiction and stress-induced maladies. However, he does not provide a range of references for scientific outcome research on yoga nidra and health care in this section of his book. It may be that yoga nidra is waiting for the scientist practitioner to develop further hypotheses for clinical and research work.

Part Four

In Part Four, "Addenda," Panda offers the reader examples of two types of Tantric *nyasa*, which, as stated previously, allow us to conceptualise the way the complex traditional yoga nidra, Tantric *nyasa*, was adapted by Satyananda Saraswati toward "best fit" for everyday use.

Summary

Yoga Nidra Trance makes a contribution to clinical and research work in the domain of yoga, meditation, and mind-body wellness. Panda traces yoga nidra back to its ancient sources, identifies it as yogic trance to facilitate comparison with hypnotic trance, and discusses mind from both Eastern and Western perspectives.

Panda offers academically oriented insight into ancient techniques for shifting awareness. He facilitates, by provision of scripts for two types of Tantric *nyasa*, comparison with modern adaptations of these strategies for everyday use by other authors. He outlines the potential for wide application of the practice processes for self-regulation.

Most significantly, Panda's work provides a "bridge" that enables transition from the source of yoga nidra in ancient Tantra, to the work of Satyananda Saraswati who revisited ancient Tantric texts and devised a simple and effective form of yoga nidra suitable for everyday use, and facilitates recognition of the very successful application of these ancient mind-body processes to shift awareness in Dean Ornish's work of opening the heart in its deepest sense.

Ornish (1990) states that yoga complements rather than replaces Western approaches. Knowing the power and limitations of each is very important.

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The Manchurian Candidate

2004. Directed by Jonathan Demme

Hypnosis, Brainwashing, or Neural Implants?

This film depicts the central character of Raymond Shaw (played by Liev Schreiber) who wins a Congressional Medal of Honor for his bravery in combat. In major supporting roles, protagonist Denzel Washington plays the highly normal and believable Persian Gulf War veteran Ben Marco, while Meryl Streep, as Shaw's mother, Senator Eleanor Shaw (supposedly a Hilary Clinton type), would be Fritz Perl's quintessential "top dog," alternately trying to manipulate, seduce, or subconsciously kill her son.

Views of Hypnosis as Highly Influential

For those of you who have often wondered where the term "Manchurian Candidate" comes from (after someone has challenged you about the "power over the client" issue in hypnosis), then this film will explain it. Oddly enough, the real powerbroker is a large multinational corporation – Manchurian Global. However, conspiracy theory is not the issue here in the review, although U.S. films and TV programs indicate that Americans thrive on it.

Modern Setting

The film has been updated since the 1962 version, in terms of its relevance and implications to today's audience. Rather than being set around POWs in the years after the Korean War, it is about the Gulf War. There appears to be no attempt to depict the ex-combat personnel as being brainwashed while in captivity; if there had been, then that would have taken the film in a totally different direction which would have been much more suited politically to the time when the Richard Condon's novel (1959) and John Frankenheimer's version of the film (1962) were released.

The media directs the attention of the viewing public constantly to the events of war in several countries. Thus viewers witness, in their lounge rooms, graphic images of troops being sent to conduct offensives, peace missions and stabilization projects, and then watch these same personnel being subjected to the scrutiny of tribunals and courts about "behaviour unbecoming." It is understandable that the director, Jonathan Demme, decided to set the plot

within a different and more topical scenario – the possibility that men could be manipulated following invasive operations on the brain that delete specific segments of their memories, and have microchip implants inserted under their skin that would then control their thoughts, words, and behaviours.

Misleading the Public About Hypnosis

However, although the plot is about manipulation and control by mechanical means, this second version of *The Manchurian Candidate*, based more loosely than the first on Richard Condon's novel, misleads the public once again on the nature of hypnosis, hypnotisability, and hypnotic processes. If the word "hypnotised" had not been mentioned at all in the film, then the story would have more clearly targeted memory drugs and memory removal procedures, several of which have been topical in the popular press in the past few years. If that had been the case, then the major subtext would have been about control, both in terms of the larger societal system and the closer family system.

The presence of these new means of mechanical control do begin to emerge more strongly as the film continues, but references to hypnosis are misleading and confusing. Men in the armed forces are obedient, and are trained to follow orders; they do not need to be hypnotised to do so. Studies on obedience and compliance demonstrate that non-military people, on command, will inflict pain on others under certain circumstances, and history has demonstrated that men at war commit terrible atrocities.

The public needs to be aware that while hypnotic type procedures may be utilised in brainwashing, it is not hypnosis per se that is being undertaken. The perpetuation of this mistaken equating of brainwashing with hypnosis in films such as *The Manchurian Candidate*, especially with the highly likeable and respected Denzel Washington as one of its stars, only serves to further mislead the public about the effects of hypnosis. We already know that people who use television and films as a main source of information about hypnosis tend to hold negative views about it (Large & James, 1991; McConkey & Jupp, 1985).

The director makes no attempt to demonstrate that the general population exhibits a range of hypnotisability (Wagstaff, 2004); rather, it appears that all are highly hypnotisable. Nor does he explain that some people are dissociators like Denzel and some are associators like the member of his old patrol who, during and following his dreams, started having breakthrough memories about

the horrors of the war crimes to which they were supposedly accomplices, if not the actual perpetrators.

Note that it is not the normal killing of people in war that was the problem. Rather it was the calculated and vicious killing of people, against the terms of the Geneva Convention and the dictates of their souls, that was the root cause of their disquiet.

One has to admire the director, nevertheless, when he merges a number of correlates of hypnotisability into the recovery of the soldiers' memories of war crimes that they, or others, had committed.

Grudgingly, I have to admit that it is understandable that the idea of being hypnotised comes in to the story, as there are several suggestions that could be construed as post-hypnotic. For example: "As soon as the task is complete, you will have forgotten it ever took place." However, the real point is that it was a command, not a post-hypnotic suggestion.

Also it could be said that there might be evidence of the phenomena of hypnosis at work in terms of pain management during the brain operations. The patients are simply told that they will be able to experience this procedure without too much discomfort.

Again, no anaesthetic was used during these highly invasive medical procedures (drilling a hole into the brain) which was really odd, so why use commands about being free of discomfort? Here again, there was no blood, which could indicate that hypnotic anaesthesia was used, with perhaps strong suggestions being sent to the body not to bleed. (Later in the movie, however, one of the victims does talk about the discomfort of the operation.)

It took some time for the viewers to realise that there was a key word used to make a soldier compliant; this was used by the authorities, medical staff, and in one case by the prospective senator's mother. Each cue word was different for each person and was thus a special mantra. The use of the cue word does smack of hypnosis, as do the commands that could be construed as post-hypnotic suggestions. However, there is no evidence, anywhere in the movie, that a specific hypnotic induction had taken place, or of the use of deepening procedures; nor are there depictions of the termination of induced trance states.

Now here is the question that may prompt many misconceptions about the power of hypnosis alone to persuade people to do and say things they would not normally do: "Are you saying that an entire squad of U.S. soldiers was hypnotized into believing that Raymond Shaw deserved the Medal of Honor?"

(The director could have been working on the knowledge that the public's fears about hypnosis centre around a fear of loss of control [Spanos, Brett,

Menary, & Cross, 1987]. Indeed experiments have found that certain sections of the general public believe that hypnotists have complete control of participants and can suggest embarrassing or inappropriate behaviours [Dalglish & Wright, 1991; London, Cooper, & Johnson, 1962], and that they can be made to forget all or part of an hypnotic session [Channon, 1984].)

Prior to this point in the movie, the idea that hypnosis could cause people to forget large chunks of information is insinuated, but never really spelt out. The director weaves in a number of possible reasons for the loss of memory — part of his strategy to build and maintain suspense. It becomes evident that hypnosis is being used as a scapegoat, as certain authorities do not want their medical surgery techniques to be uncovered. While there are flashes about invasive surgery from about halfway through the movie, the awful truth does not get revealed until the end. However, hypnosis is not cleared even then — the taint remains, as does the possibility that any teacher, researcher, or practitioner of hypnosis may one day be confronted with: “But what about the *Manchurian Candidate*?”

Then there are the microchip implants, the purpose of which is not really clarified. When they are first introduced in the movie, their appearance tends to make the person look like one more fantasy-prone American fearing they have an alien implant (Spanos, Burgess, & Burgess, 1994). It was not obvious what the chip contained and how it was activated: “Someone got into our heads.” *Please shoot ... now suffocate ...*

Could this movie be used to demonstrate that hypnosis alone could be used to persuade vulnerable person to commit murder? It is not likely, but viewers generally do not dissect the plot in movies or check for competing factors that might trigger such violence.

It certainly seems that the director considered that he should pay homage to the original concept of control through hypnosis. Wagstaff (2004) reminds us of the stereotypic classical role of the hypnotic subject who goes into a deep somnambulistic trance, and in *The Manchurian Candidate* the director builds on the long-held assumption that people can perform crimes under hypnosis.

Perhaps if the director had chosen someone who represented the more hypnotisable segment of the American population as the main star rather than Denzel Washington, who was probably of low to medium hypnotisability, then the public would have been more convinced of the erroneous belief that hypnosis has the power to make people commit crimes. Fortunately, the only character who could be considered to be very much in a trance state is Al Melvin (played by Jeffrey Wright), whose dreams are breaking through into his

drawings; it is these dreams and drawings that become the pivotal point in confronting the other soldiers. It is interesting that it is through dreams (not waking memories, but unconscious dreams) and, on occasions, flashbacks that the three main characters begin to be confronted with a shared past that must be addressed.

Disturbing Questions

Two major questions remain: Can you be made to take actions against your will? And once you have done terrible things, can you be made to forget these actions? In fact, a yet more disturbing question is raised at the end of the movie: Was it possible, courtesy of Dr Atticus Noyle, to implant memories of atrocities that never happened in order to keep these men under his control for the rest of their lives?

The overriding concern for the public that the film raises is: Could this type of medical procedure be used in soldiers in combat? The awful answer is that it is definitely a possibility, although there is no research to prove just how long the memories would be suppressed and how much of the brain would have to be destroyed in order to achieve this.

Taking a short side track for a moment, in terms of drugs currently used in surgical procedures such as endoscopies to erase the memory of the operation, the person may experience pain or discomfort depending on the state of their internal organs, but this is then supposedly removed after the operation by the administration of a drug. People who have had such procedures report disorientation and significant memory loss for much longer than one day and in some cases for more than a week. No studies have been undertaken to determine the long-term negative effects of the use of memory deletion drugs.

The movie also raises the issue of the use of memory deletion drugs to ease trauma. In certain medical initiatives outlined in the past year in the press, the removal of memories has been proposed to assist victims to forget physical and sexual assaults and accidents, to control the onset of PTSD, and to reduce distress caused by the access to, or triggering of, such memories. Such proposals are fraught with serious consequences for society and especially for victims. Just suppose that this were possible, could the memories thus removed by drugs surface again through dreams, as depicted in *The Manchurian Candidate*, once the appropriate stimuli emerged?

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