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EDITORIAL COMMENTARY

This Special Issue takes as its starting point the English High Court case brought in 1998 by Mr Christopher Gates against the well-known television entertainer and stage hypnotist, Mr Paul McKenna. In addition to considering the question of possible dangers inherent in stage hypnosis raised by this case, the broader issues of the nature of mental illness and the incidence of negative effects of hypnosis in clinical and research settings are also addressed. The target paper is written by Graham Wagstaff, one of the expert witnesses in the *Gates v. McKenna* case. The invited commentaries are by Richard Bentall, Michael Heap, Steven Lynn and his colleagues, and Frank Vingoe. This is followed by Wagstaff's Reply to all four commentaries. Also in this Special Issue is a paper by Michael Heap concerning another court case which centred on the possible adverse effects of stage hypnosis. The case was originally presented at the 15th Annual Conference of the British Society of Experimental and Clinical Hypnosis (BSECH) in 1998 and was reported as an abstract in the subsequent Conference Proceedings (Heap, 1998). It is directly relevant to the topic under debate and is included here as a full paper.

The debate on possible negative consequences of hypnosis will continue in the next issue (17.4) of *Contemporary Hypnosis* with an extended commentary by John Gruzelier, who was also an expert witness in the *Gates v. McKenna* case. Gruzelier's paper will address the issues raised by Wagstaff and the other contributors to this Special Issue and will put the *Gates v. McKenna* case in the historical context of hypnosis and psychopathology generally. He will also consider the case in the more specific context of evidence concerning adverse effects of hypnosis in the domains of experimental, clinical and stage hypnosis. We hope to be able to publish a further Reply by Wagstaff to accompany Gruzelier's commentary in Issue 17.4.¹

In addition to the two papers mentioned above, Issue 17.4 will include Wagstaff's reply to Gruzelier's recent paper on the nature of hypnosis (Gruzelier, 2000) – which itself was a response to papers by Wagstaff and others in the 1998 'Definition of Hypnosis' Special Issue (15.3) of *Contemporary Hypnosis*. Also scheduled for Issue 17.4 are three case reports and a complete set of abstracts from the highly successful 17th Annual Conference of BSECH (May 2000), the second to be held jointly with the British Society of Medical and Dental Hypnosis (BSMDH). This was only the second joint BSECH/BSMDH annual conference, but, in view of its success, it seems likely that these will become more regular events in future.

Good news on the journals front is that the *Contemporary Hypnosis* Editorial Office has just received a double issue of the *American Journal of Clinical Hypnosis* (*AJCH*, Volume 42, Nos 3 and 4) plus all the missing back issues from April 1998 (Volume 40, No. 4) onwards. The Editor of *AJCH*, Ed Frischholz, is to be congratulated on turning around the backlog and catching up on the publication schedule. The newly arrived double issue features a series of substantial theoretical articles on the nature of hypnosis, by Ernest Rossi, T.X. Barber, Irving Kirsch, and Steven Lynn with Steven Sherman. Further articles in the same series are scheduled for the next issue of *AJCH* (Volume 43, No. 1). By coincidence, the most recent issue of the *International Journal of Clinical and Experimental Hypnosis* (Volume 48, No. 2) is also a Special Issue – in this case addressing the important question of the status of

hypnosis as an empirically validated clinical intervention. The areas covered in the reviews are: clinical hypnosis with children, hypnotic analgesia, hypnosis as an adjunct to cognitive behavioural therapy, hypnosis and smoking, hypnosis in medicine and hypnosis in the treatment of trauma. Richard Brown will include abstracts of all of these in his regular Abstracts of Current Literature feature in Issue 17.4 of *Contemporary Hypnosis*.

Plans for the four issues of *Contemporary Hypnosis* next year (Volume 18, Nos 1–4) are already well under way – as ever, we rely on a regular supply of experimental studies, case reports, reviews and so on from you and your colleagues.

I look forward to hearing from you.

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Note

¹The views expressed in this Special Issue and in the continuing debate in Issue 17.4 cover a wide range of beliefs and opinions and are those of the individual authors concerned. They should not be taken singly or collectively to represent the official views of the Journal, its Editor, or of the British Society of Clinical and Experimental Hypnosis.

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MAIN PAPER

CAN HYPNOSIS CAUSE MADNESS?

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Abstract

Recent controversy about the dangers of hypnosis came to a head in the summer of 1998 with the High Court trial in London of a stage hypnotist for allegedly inducing schizophrenia in one of his participants. In this paper a number of issues arising from the case are critically examined; included are the propositions put forward by the prosecution that the hypnotic state is similar, psychologically and neurophysiologically, to that of schizophrenia, and thereby, because of its very nature, hypnosis can increase vulnerability to psychotic illness and other forms of psychological damage; inadequate dehypnosis may lead to a person remaining in a pathological state; and a series of fairly routine stage hypnosis suggestions can act as a trigger for a schizophrenic reaction in certain individuals. It is concluded that hypnosis procedures must always be applied with due caution and regard to the rights of participants, but that there is no substantive scientific evidence to support any special link between hypnosis and the triggering of episodes of schizophrenia.

Key words: hypnosis, hypnotizability, schizophrenia, frontal cortex, stage hypnosis, dangers of hypnosis

Introduction

The impetus for this paper came from a High Court case that received particular prominence in the British media in the summer of 1998. The case involved a writ issued on behalf of Mr Christopher Gates against the stage hypnotist and entertainer Paul McKenna.

According to the writ issued on 10 October 1996, the case for the plaintiff, Mr Gates, can be briefly stated as follows. On the night of 10 March 1994, Gates was in the audience at a demonstration of stage hypnosis by the defendant, Mr McKenna. On this occasion McKenna coaxed or persuaded Gates, against his conscious will, to volunteer to participate in the show by using various procedures designed to select out those people, such as Gates, who are susceptible to falling into a deep hypnotic trance. McKenna then proceeded to place Gates in such a trance and to make him perform humiliating and embarrassing activities of which he was not fully conscious, and which he would have resisted had he not been in this deep trance state. Moreover, he was not adequately dehypnotized. As a result of this episode, Gates developed schizophrenia. Significantly, according to the prosecution, Gates had no previous history of mental illness.

In the event, the judge ruled against the plaintiff. Nevertheless, in the light of recent discussions about the dangers of hypnosis, the arguments in this case remain worthy of careful consideration.

The case as presented by expert evidence for the prosecution rested on an important assumption – that hypnosis involves certain neurological changes that, if not handled carefully, can make certain participants in hypnosis especially vulnerable to psychotic illness. Among these is the induction of a special altered state of consciousness, or trance, similar to that of schizophrenia. In this state, one's conscious will is interfered with to such a degree that one can be made to have unpleasant experiences and perform stressful and humiliating actions that would not be possible, and to which one might object, in a normal waking state.

The overall formulation put forward by the prosecution became somewhat less emphatic as the examination and cross-examination of various witnesses proceeded; but it is summarized, in its more circumspect form, in the judge's notes, as follows:

Psychologically distressing aspects of the stage hypnosis acted as a stressor on an existing vulnerability in the plaintiff's brain structure/function; which, when taken in conjunction with the close similarities in the neurological underpinnings of schizophrenia and hypnosis, resulted in the possibility that (whether or not the brain was returned to its pre-hypnotic state) his vulnerability could be unmasked, and so could have triggered the schizophrenic episode (Toulson, 1998: 16).

It will be noted that within this final formulation it is accepted that for a schizophrenic episode to be triggered, the individual concerned must have some existing vulnerability. Nevertheless, unless or until this vulnerability is 'unmasked', the individual may ostensibly be perfectly psychologically healthy (as was claimed to be the case with Gates). In other words, the proposition here is that all practitioners of hypnosis are inducing a state similar to schizophrenia in their clients, patients and experimental subjects, and that, particularly if people become stressed in this psychotic-like state, schizophrenia may be unmasked in some who might otherwise seem and remain psychologically healthy. Elsewhere, the prosecution also proposed that if a person is not adequately dehypnotized, he or she may essentially remain stuck in this psychotic-like state.

The case raises a number of issues not only about the status and dangers of stage hypnosis, but about hypnosis in general. But, whatever one thinks of stage hypnosis, it seems fairly obvious that if these assumptions had received the support of the High Court, the consequences for the general practice of hypnosis in this country for therapeutic and research purposes could have been considerable.

As much of the prosecution's case was based on the alleged 'close similarities in the neurological underpinnings of schizophrenia and hypnosis', I will begin by examining this proposition. In this brief article it is impossible to cover every item raised by the experts for the prosecution; however, by selecting some of the more important assertions, perhaps I can present a representative sample of the problems involved.

Is hypnosis similar to schizophrenia?

According to the prosecution, hypnosis produces uncommon alteration of brain activity similar to that found in schizophrenia. Among the electrophysiological changes which reflect this similarity are inhibitory influences in the frontal lobes of the brain, which control the planning of behaviour and reality testing, and changes in

perception such as enhancement and blocking of sensory stimulation. Moreover, these parallels between hypnosis and schizophrenia are allegedly endorsed by certain kinds of neurophysiological and neuropsychological evidence.

But how similar is hypnosis to schizophrenia? In the expert evidence given on behalf of the prosecution, a number of phenomena were listed which allegedly form parallels between hypnosis and schizophrenia. Let us consider each in turn.

1 Positive and negative hallucinations

The first proposition is that hypnotic subjects and schizophrenics experience positive and negative hallucinations. However, according to the classification of mental and behavioural disorders in the *International Statistical Classification of Diseases and Related Health Problems, tenth revision (ICD-10)*, section F20 (1992), the hallucinatory sounds and images that may occur in schizophrenia tend to be persistent and intrusive (for example, thought echo, voices giving running commentary, and hallucinations that may occur every day for weeks or months on end). Arguably, hypnotic hallucinations are very different. Typically, hypnotic hallucinations are reported to occur as temporary responses to particular suggestions or instructions (for example, the hypnotized individual will be asked to imagine, see or hear a specific object); they are not spontaneous, persistent and intrusive happenings. Hypnotized subjects do not typically find themselves bombarded by self-generated, unwanted, unsuggested hallucinations. Moreover, it has long been known that reports of suggested hallucinations are not confined to hypnosis – that is, normal ‘unhypnotized’ subjects will also report hallucinatory experiences in response to specific suggestions or instructions in non-hypnotic situations (see Barber, 1969).

Also referred to as evidence of a link between hypnosis and schizophrenia were a number of ‘sensory blocking’ studies. The references here were to a number of studies that have looked at the electrophysiological correlates of giving subjects hypnosis procedures followed by specific instructions or suggestions to ‘block out’ sensory stimuli – for instance, subjects may be asked, specifically, to superimpose an imagined image or sound on top of a visual or auditory stimulus (see, for example, Spiegel, Cutcomb, Ren and Pribram, 1985; Spiegel, Bierre and Rootenberg, 1989). Such suggestions do undoubtedly produce electrophysiological changes (as ultimately must all instructions that are processed by the brain), but their interpretation has been the source of considerable controversy.

One possibility is that these physiological responses to specific instructions or suggestions simply reflect strategic attempts to follow suggestions by changing the focus of attention or using vivid imagery. Significantly, however, no evidence has been offered to show that ‘hypnosis’ is even necessary to produce these ‘blocking’ effects. It has yet to be shown that a significant proportion of a random group of subjects, given exactly the same instructions, but without hypnosis procedures, are incapable of producing the same electrophysiological changes. It is possible that anyone particularly skilled at, and motivated to engage in, the use of vivid imagery and attention shifting could produce these effects, regardless of whether hypnosis procedures are used (for a critical review of research methodology in this area, and other blocking studies, see Perlini, Spanos and Jones, 1996; also Wagstaff, 1998). In any case, other evidence suggests that a number of subjects who report negative hallucinations together with other alleged indicators of a profound dissociated hypnotic state, such as hidden observers, fail to show these physiological effects (Kunzendorf and Boisvert, 1996).

However, even if it could be shown, incontrovertibly, that hypnotized subjects are capable of producing unique responses to imagery suggestions, again it is difficult to see the connection between the temporary images that usually occur in response to specific hypnotic suggestions or instructions for vivid imagery, and the persistent and intrusive hallucinations that, according to ICD-10, are shown by schizophrenics.

2 Alterations in the reality of perceptions and relatedness to the world

A second proposition put forward by the prosecution is that hypnotized individuals and schizophrenics show similar alterations in the reality of perceptions and relatedness to the world.

There is now a variety of evidence to show that hypnotized subjects can show a number of perceptual changes. These seem to fall into two main categories. First are sensations that accompany standard induction procedures; these changes can include feelings such as warmth, numbness and tingling. However, a number of studies have shown that the subjective experiences that accompany hypnotic induction, although well validated, do not differ significantly from those that result from simple instructions to relax or use imagery (see Barber, Spanos and Chaves, 1974; Edmonston, 1977; Kirsch, Mobayed, Council and Kenny, 1992). Also, if what is meant by ‘relatedness to the world’ is something akin to ‘being in touch with reality’, I know of no evidence that losing touch with reality is a particular defining feature of hypnosis (and no evidence was offered in this case).

Indeed, data on the subjective experiences of hypnotic subjects suggest that, regardless of how they respond to suggestions, hypnotic subjects continue to monitor reality (Sheehan and McConkey, 1982).

The second category of perceptual changes during hypnosis concerns reports of perceptual alterations in response to specific suggestions (for analgesia, ideomotor responses, amnesia, hallucinations and so on). But, again, these are typically temporary events in response to specific instructions; they are not persistent, spontaneous and intrusive. Indeed, it is often proposed that hypnosis can be used therapeutically to gain control over thoughts, perceptions and behaviours.

3 Delusions of control and automaticity or compulsion of behaviour

A third alleged similarity between hypnosis and schizophrenia is that both may involve delusions of control and automaticity of behaviour. This was particularly pertinent in the present case as the prosecution had alleged that the plaintiff had been induced to participate in hypnosis and perform actions against his conscious will.

However, although the delusion that one is being controlled or influenced against one’s will is not unusual among psychotics, the issue of the extent to which hypnotized subjects lose control of their behaviour is a continuing point of conjecture in the hypnosis literature. Certainly, virtually all authorities on hypnosis would argue that, through suggestion, hypnotized subjects can be made to experience particular actions as involuntary. But this is not the same as arguing that they actually lose complete control of their behaviour – for instance, the fact that arm lowering can be experienced as involuntary does not mean that the person having this experience cannot stop his or her arm from falling if required. In fact, hypnotic subjects may actively seek to achieve involuntariness if they construe this as part of the hypnotic role (Sheehan and McConkey, 1982; Gorassini, 1996, 1997).

Indeed, there now seems to be wide agreement among most researchers and theorists of all persuasions that the procedures we label as ‘hypnosis’ do not induce a state of

automatism in which the individual loses total control of his or her actions. The definition of hypnosis provided by the American Psychological Association is thus very clear on this. It states: 'Contrary to some depictions of hypnosis in books, movies or television, people who have been hypnotized do not lose control over their behaviour' (1994: 143).

This definition has been endorsed by a variety of eminent authorities in the area who reflect a wide range of approaches to hypnosis (these include Professors E.R. Hilgard, E. Fromm and J.F. Kihlstrom). In a further survey of 10 experts on forensic hypnosis conducted by Vingoe (1995), all rejected the view that 'during hypnosis the control a person normally has over him or herself is in the hands of the hypnotist' (1995: 180). A similar view has been reportedly expressed by all of the contributors to what is probably the most important academic volume on hypnosis to be published in the 1990s – *Theories of Hypnosis*, edited by S.J. Lynn and J.W. Rhue (1991b). Thus Lynn and Rhue (1991a) conclude:

Since the 'golden age' of hypnotism (the 1880s and 1890s), the view of the hypnotized subject as a passive automaton under the sway of a powerful hypnotist has faded in popularity. In fact, this rather extreme position is not endorsed by any of the theorists whose ideas are represented in this book (1991a: 606).

It is also perhaps no coincidence that, having reviewed the scientific evidence, the independent panel appointed by the Home Office to investigate and assess performances of stage hypnosis recommended that the public should be made explicitly aware of the fact that 'The hypnotized subject retains ultimate control over his/her actions' (see Home Office consultation document, 1995, Annex D).

In sum, although accepting that certain hypnotic responses may be perceived as involuntary, arguably most informed expert opinion would seem to reject the view that hypnotized subjects experience profound delusions of being controlled in the same way as schizophrenics. However, I shall return to this issue again shortly.

4 Dissociation of emotion from the appropriate context, and delusions of identity

A final proposition put forward by the prosecution is that both hypnosis and schizophrenia involve dissociation of emotion from the appropriate context, and delusions of identity. However, whereas in many therapeutic environments clients may occasionally experience these phenomena, it is certainly not my experience, or that of other practitioners of hypnosis I have consulted, that inappropriate emotion and delusions of identity are typical features of hypnosis, and I know of no scientific evidence to support this idea; I would also reiterate that the evidence suggests that, typically, the subjective experiences of routine hypnosis do not differ from those that result from instructions to relax or use imagery (see Kirsch et al., 1992).

So far, then, it could be argued that there is nothing in any of these categories of phenomena that would suggest a close similarity between schizophrenia and hypnosis.

Is frontal lobe inhibition a characteristic of hypnosis?

The expert evidence for the prosecution also mentioned a number of neuropsychological and neurophysiological studies that allegedly endorse the conclusion that schizophrenia and hypnosis are linked. The main thrust of the evidence was to show that, in both hypnosis and schizophrenia, there are inhibitory influences in the frontal lobes of the brain, which control (and thereby reduce) the planning of behaviour and reality testing.

However, as yet there is no research evidence to support the idea that inhibitory influences in the frontal lobes of the brain are a general characteristic of hypnosis. Instead the evidence suggests that hypnosis may have both facilitatory and inhibitory influences, depending on the type of suggestions given. For example, data from Gruzelier and Warren (1993) are consistent with the view that highly susceptible subjects show inhibitions in frontal lobe activity during and immediately after an initial hypnotic induction procedure. However, for frontal lobe inhibition to be a defining characteristic of hypnosis, this inhibition should remain throughout a full and varied series of hypnotic suggestions. This does not seem to be the case – for example, having reviewed the psychophysiological literature, including studies of cerebral blood flow during analgesia suggestions, Crawford (1996) concludes that, ‘Rather consistently there is *increased* involvement of regions within the frontal cortex during hypnotic suggestion’. Yet, as Crawford points out, ‘PET studies show increased activity in the frontal cortex during the performance of *willed actions*’ (1996: 269–71, my emphases). In other words, if frontal lobe activity is presumed to be a measure of planning, then highly susceptible subjects can show brain activity consistent with *increased* planning or executive decision making when responding to some kinds of hypnotic suggestions.

Also, in another study by Jasiukaitis, Nouriani and Spiegel (1996), neurophysiological correlates of a hallucination suggestion were found to be associated with left hemisphere superiority, another supposed indicator of increased planning activity; hence Jasiukaitis et al. conclude,

Highly focused attention, simultaneous with a relative independence of behavior from context, has long been considered a fundamental aspect of hypnotic behaviour. Such narrow attentional focus would seem to be a function of the left hemisphere’s *detailed analytical and sequential processing* (Jasiukaitis et al., 1996: 667, my emphasis).

This finding again would presumably indicate that hypnotic hallucinations are associated with *increased* planning activity for highly susceptible subjects.

The upshot of all this is that the scientific evidence seems to reject the idea that there is a special inhibitory brain state that is common to all hypnotic phenomena, and that is also shared with schizophrenia. Instead, brain activity varies according to the type of suggestion given (see Wagstaff, 1998). Indeed, if we equate activation of the frontal lobes with increases in planning activity, the neurophysiological evidence would indicate that, in response to some suggestions at least (for instance, analgesia and hallucinations), hypnotized subjects executively plan their activities *more* than un hypnotized subjects.

Nevertheless, even if we were to accept that hypnosis does fundamentally involve ‘inhibitory influences in the frontal lobes of the brain which control the planning of behaviour and reality testing’, what would be the significance? Would it follow that hypnosis involves some sort of ‘uncommon’ brain state that results in a state of automatism and possesses commonalities with schizophrenia?

Frontal lobe inhibition, planning and automatism

Let us consider a study on normal, psychologically healthy individuals that did not involve hypnosis. Morris, Ahmed, Syed and Toone (1993) looked at regional blood flow in the frontal cortex. The researchers asked subjects to perform two versions of the task that were identical in their sensorimotor or physical movements, but that

needed different degrees of mental planning. So, in one condition, subjects had to work out what moves to make to complete a task; in the other, the moves were guided by a computer (that is, they simply followed the moves as dictated by the computer). The results showed that when subjects deliberately planned their moves, activity in the left frontal cortex was increased; or conversely, when asked to simply follow the instructions of the computer, comparatively, left frontal activity was depressed.

One of the implications of this study is that when normal individuals, in non-hypnotic contexts, passively 'follow instructions' rather than plan their behaviours by themselves, they tend to show less left frontal activity than when they are planning their activities. In other words, to show a relative decline in activities related to the left frontal lobe, and perhaps other areas of the brain that have been associated with 'planning' or regulatory control, you do not need to be in some special 'uncommon' brain state; all you need is to be in a frame of mind to accept and act on the instructions of others (including a computer). Importantly, however, presumably no one would wish to argue that when Morris et al.'s subjects followed computer instructions, they had become ultra-suggestible automata, unable to control their behaviour.

Accordingly, if, during hypnotic induction, participants were to 'let go', follow the instructions of the hypnotist, let the hypnotist dictate their behaviour, and show various neuropsychological and neurobehavioural correlates of this behaviour, it would not follow that they would lose control of the process, any more than they become automata by deciding to follow and act on the instructions of a computer. Consequently, even if we accept that hypnotically susceptible subjects who follow an induction ritual show a decrease in frontal function, it does not follow that, in doing so, they become helpless pawns of the hypnotist, in a schizophrenia-like state.

The fact is that, even if we entirely agree that hypnosis more or less routinely produces deficits in frontal lobe function related to planning, it has yet to be shown that hypnotized subjects enter some special, schizophrenia-like brain state, in which they lose control of their actions. On the contrary, as I noted earlier, most expert opinion would seem to reject this idea.

Do hypnosis and schizophrenia involve abnormal activation of the cingulate?

Another of the phenomena described in the expert evidence for the prosecution as supposedly linking hypnosis to schizophrenia is abnormal activation of the cingulate. With regard to this, reference was made to a study by Rainville, Duncan, Price, Carrier and Bushnell (1997) which, in essence, showed that when hypnotic subjects are given a pain stimulus, and are asked to experience it as pleasant or as unpleasant, the neurophysiological data from the cingulate cortex and other parts of the brain are consistent with the view that the pain can be experienced as pleasant and unpleasant, even though its perceived intensity remains the same.

However, as is typical in perhaps most neurophysiological studies of hypnosis, in this study Rainville et al. did not include a non-hypnotic control group given the same analgesia suggestions (that is, a group of subjects given no hypnotic induction procedure). If they had, they would probably have found that 'hypnosis' was an irrelevant consideration. For example, a number of studies indicate that, in both hypnotic and non-hypnotic situations, subjects report that suggestions for analgesia are effective even when there is no evidence that the pain stimulus is any less discriminable; in other words, although subjects, regardless of whether they have received hypnosis,

often report that they felt less pain in response to a suggestion of analgesia, there is no evidence that their brains are successfully 'blocking out' the pain stimulus (see, for example, Spanos, 1989, 1991). The plausible explanation put forward some years ago by the late N.P. Spanos is that many subjects who successfully experience suggested analgesia may do so not through blocking out the painful stimulus, but by interpreting the stimulus in a more positive way. Thus Spanos concludes, 'These findings may indicate that suggestions for reduced sensitivity produce their effects by inducing subjects to reinterpret (rather than to 'block out') sensory activity' (1991: 341).

It seems, therefore, that Rainville et al. may have found neurophysiological support for Spanos' proposal that normal, psychologically healthy individuals tend to respond to suggestions for analgesia by trying to reinterpret the pain stimulus such that it is not perceived as unpleasant. As such, Rainville et al.'s results are interesting and important, but they do not really qualify as indicating 'abnormal activation of the cingulate', with its connotations of pathology. Indeed, the modern view is that responsiveness to hypnotic suggestions for analgesia is best construed as an ability, not an illness.

On the basis of these considerations, these alleged links made by the prosecution between the neuropsychological and neurophysiological correlates of hypnosis and those of schizophrenia seem to be somewhat superficial. However, even if it were the case that hypnosis and schizophrenia were deemed to be similar, it would not follow that the former can cause the latter. If A 'looks like' B, it does not follow logically that A causes B. So is there any more direct evidence that hypnosis can cause schizophrenia?

Is hypnosis likely to cause schizophrenia?

The prosecution in this case provided a variety of case studies allegedly illustrating the negative effects of all kinds of hypnosis. However, as emphasized by counsel for the defence, in all of these cases there was not a single example of someone who had previously shown no symptoms of pathology, becoming schizophrenic during or following hypnosis (of any kind). Indeed, despite the prominence they have been given by the media, reports of serious psychological problems following hypnosis of any kind are extremely rare.

For instance, in its 1995 review of the Hypnotism Act of 1952, the panel appointed by the Home Office was presented with reports of only 25 cases (including the present case) of harm allegedly related to performances of hypnosis covering the past 25 years (including cases such as a broken leg). Although not in any way attempting to dismiss the genuine distress that many of these individuals reported, it must be remarked that, as a proportion of the thousands of individuals who participate in stage hypnosis shows every year in this country, this number is extremely small. Moreover, with the exception of the present case, none involved schizophrenia. However, the main problem with any reports of this kind is that, by themselves, they do not enable us to determine the exact role that 'hypnosis' played in producing the problems described.

For example, West and Dekert (1965) cite a few cases in which hypnosis allegedly intensified schizophrenic symptomatology. However, even in these cases, without comparison data on the intensification of symptomatology following other therapeutic interventions, and more mundane events, this amounts to no more than *post hoc ergo propter hoc* theorizing. This particular paper was criticized by Conn (1972) for this reason; thus he comments,

West and Dekert's report is unnecessarily alarming.... I have discussed this matter with a number of clinicians, among whom are Erickson, Wolberg and Kline. All of them agreed that the psychotic process develops slowly over a period of years and that it is not 'precipitated' by one or many hypnotic experiences.... Patients have been reported by others ... as becoming psychotic *following* hypnosis, but never, in my opinion, *because* of hypnosis (1972: 70, his emphasis).

To determine whether hypnosis procedures result in an increased risk of serious psychological problems, we need to compare the incidence of difficulties following the administration of hypnosis with other situations that are not presumed to be especially associated with such problems. This point has been made forcibly by Lynn, Martin and Fraumann (1996) with regard to the dangers of hypnotherapy. They say,

a small but unknown percentage of clients experience unexpected or adverse reactions during hypnotherapy. Given the absence of comparative data with nonhypnotized clinical samples, one cannot attribute these effects specifically to hypnosis ... the available data do not justify the conclusion that hypnotherapy is any more dangerous, or ultimately less effective, than other psychotherapy and relaxation procedures (1996: 9–12).

Similarly, statistical surveys of the negative effects of hypnosis that do not include an un hypnotized control group tell us nothing about the role of hypnosis in producing the negative effects reported. For example, a major problem with the interpretation of negative comments made by some subjects following demonstrations of stage hypnosis is a failure to recognize the influence of the common phenomenon of 'performance anxiety'. Stage hypnosis is a situation in which subjects are essentially in the same position as actors performing in front of an audience, so, not surprisingly, some participants in stage hypnosis report the same symptoms of performance anxiety as others who perform in public, such as actors, lecturers, musicians, public speakers, and those involved in sports and television. Symptoms of performance anxiety can include stress, nervousness, anxiety ('stage-fright'), feelings of a loss of control, and physiological manifestations of nervousness such as dizziness and headaches. However, because they are inexperienced in performing in public, a number of participants in stage hypnosis shows (as well as observers) may mistakenly attribute such reactions to some mysterious aspect of the 'state of hypnosis'.

Particular problems are also involved with the interpretation of some subjects' more specific claims that they felt 'controlled by the hypnotist' (see, for example, Echterling and Emmerling, 1987; Crawford, Kitner-Triolo, Clarke and Olesko, 1992). Some subjects may simply be distorting the truth to fit in with role demands, or (as in the case of those who feel that their stage performances were rather poor or embarrassing) in an attempt to justify their behaviour to others. However, in my experience, when subjects say they felt 'out of control' or 'controlled by the hypnotist', they usually mean 'subject to social obligations'.

Stage hypnosis, like a game show, and many therapeutic and domestic situations, can be a powerful social situation in which people feel a strong social obligation to do what they are told (which increases with the more things they actually consent to do). It has powerful 'demand characteristics' (see Orne, 1962). Thus, having volunteered, if subjects are then told to do something that they for some reason find embarrassing (such as do an impression of a pop star, at which they are very poor), they may feel socially obliged to do it, but also apprehensive about what they may be asked to do next, and annoyed to find themselves in this situation. Occasionally, therefore, some hypnotic subjects may report feeling 'embarrassed', 'out of control' and 'annoyed',

and, because they underestimate the influence of social or situational pressures, they may even express some surprise at their compliance, and attribute it to some feature of 'hypnosis'. We need to know, therefore, whether the pressures to perform in a stage hypnosis demonstration are any different from those in many other situations, such as television game shows.

As far as I am aware, however, no scientific study has yet systematically compared the effects of stage hypnosis with other non-hypnotic situations, although some researchers have looked at more routine kinds of hypnosis. For example, Coe and Ryken (1979) showed that 49% of their student subjects reported negative effects following two sessions of hypnosis procedures which included suggestions for age regression, hallucinations and amnesia; these effects included headaches, stiff necks, light-headedness, dizziness, drowsiness and a desire to sleep. However, subjects reported that they experienced these symptoms as often in response to attending lectures and college life in general. Indeed, subjects were more likely to report that they had become anxious, fearful, depressed and unhappy as a direct result of attending lectures, doing examinations, or participating in college life, than they had as a result of hypnosis.

This study illustrates the difficulties involved in drawing conclusions from anecdotal cases, and groups of 'hypnotized' individuals, without adequate baseline data of the prevalence of such problems in other 'non-hypnotic' situations. Taken in isolation, the statistic that nearly half of the subjects participating in hypnosis sessions report some negative responses, of which some are apparently serious, looks significant. Put it in the context of reactions to other situations, however, and it becomes unexceptional.

In contrast, in another experimental study, Page and Handley (1993) compared a large group of subjects given hypnosis procedures (N=687) with a small group of subjects (N=59) who watched a film and were then given a 20-minute lecture on drugs. On the basis of their data they conclude that more negative effects occurred following hypnosis. However, the results of this study are not at all clear cut. For example, the researchers decided to discount negative effects such as 'confusion, drowsiness, anxiety and irritability' from parts of their analysis because they say these 'can be considered to be commonly expected occurrences in a classroom setting'. It is thus all the more significant that none of the individual comparisons between the hypnosis and non-hypnosis groups in terms of reports of depression, headache, nausea or sleep difficulties reaches statistical significance, and not one of the 687 subjects who underwent hypnosis reported anything approaching a psychotic reaction such as 'unusual thoughts or disorientation' or 'miscellaneous physiological changes' (see pp. 32-3).

Only one study in the literature seems to have looked specifically at the relationship between hypnosis procedures and the development of serious mental health problems such as psychoses. In a study by Faw, Sellers and Wilcox (1968) 207 subjects were assigned to a hypnosis condition or a non-hypnotic control condition. Subjects in the hypnosis condition were given induction and suggestion procedures for 50 minutes, once a week for three weeks; the procedures included induction procedures that involved flashing lights and hallucinatory procedures; and suggestions included catalepsy of the arm and finger, hallucinations and amnesia. The results showed that those subjects receiving hypnosis fared no worse on standardized measures of neuroses, behavioural problems or psychoses; in fact, if anything, the trends indicated that the effect of hypnosis was to make them more psychologically healthy. Moreover, in this study only one subject suffered a psychotic breakdown after the

experiment, for which he sought counselling services, and this person was in the non-hypnotic control group. This study again illustrates the problem of drawing inferences from single cases; if the person suffering a breakdown had been in the hypnosis group, the breakdown might well have been attributed to some malignant feature of 'hypnosis', and been reported in the case literature as such.

In the present case much was made by the prosecution also of the alleged high hypnotic susceptibility of the plaintiff; the logic being that if hypnosis is similar to, and thereby can cause schizophrenia, this would be most likely to occur in someone who was hypnotically susceptible. However, there is no empirical support for a positive relationship between hypnotic susceptibility and vulnerability to schizophrenia; studies indicate that either there is no relationship between schizophrenia and hypnotic susceptibility, or that schizophrenics tend to be lower on measures of hypnotic susceptibility. Thus Lavoie and Elie (1986) report that schizophrenic symptoms related to autism and social withdrawal were found to correlate negatively with hypnotic susceptibility; indeed, in a recent review of the relevant literature on hypnosis and psychopathology, Groth-Marnat (1991) concludes that, 'Most groups of psychiatric patients have lower levels of hypnotizability than controls. The more severe the disorder, the lower the level of hypnotizability' (1991: 223). More particularly, Groth-Marnat concludes that 'psychotic disorders (especially chronic schizophrenia), generalized anxiety disorders, and affective disorders are associated with *low* levels of hypnotic susceptibility' (1991: 229, emphasis added).

The scientific evidence reviewed so far, therefore, does not seem to support the view that there is any causal link between the administration of hypnosis procedures of any kind, and susceptibility to severe mental disorders such as schizophrenia. Nevertheless, a case was also put forward by the prosecution that there were particular features of the defendant's performance that might have been especially distressing to the plaintiff, and likely to provoke or trigger a schizophrenic reaction.

Hypnosis and double-bind communications

At one point in the defendant's act, the plaintiff was given a suggestion that he was at his place of work. The prosecution alleged that, without cancelling this suggestion, Gates was asked to sit down, and then behave like a ballet dancer. According to the prosecution, Gates would have been significantly psychologically damaged by these commands to sit down, or behave as a ballet dancer, because Gates' work was that of a furniture polisher – a job for which one has to stand up, and one which is incompatible with ballet dancing. In the prosecution's view, the suggestions given by the defendant would have presented the plaintiff with extreme conflict. One expert for the prosecution even argued that these suggestions represented double-bind communications similar to those expressed in the double-bind theory of schizophrenia.

I would suggest, however, that this view does not stand up to close scrutiny. In standard experimental conditions, subjects responding to standard suggestions are routinely asked to perform conflicting actions; for example, they are asked to bend their arms while keeping them rigid; to separate their hands while they are glued together; to stand still while being instructed to sway; to sniff an unpleasant odour while imagining it as a pleasant sensation: yet there is no evidence to show that such suggestions especially predispose hypnotized subjects to develop symptoms of stress. On the contrary, some have argued that the ability to tolerate incongruities, or 'trance-logic', is a defining feature of being hypnotically susceptible; thus Orne (1959)

argued that one of the principal features of the hypnotic state is 'the ability to tolerate logical inconsistencies that would be disturbing in the wake state' (1959: 297). In other words, the role of the hypnotic subject allows or even encourages tolerance of inconsistency.

In response to the view that the suggestions given by the defendant represented double-bind communications similar to those expressed in the double-bind theory of schizophrenia, it could be said that the situations are hardly comparable. The double-bind theory of schizophrenia assumes that the vulnerable individual is, day after day, year after year, bombarded with conflicting and emotionally salient communications from significant others (such as messages of love accompanied by signs of hostility). This does not compare with a few hours of stage hypnosis. But, in any case, the double-bind theory of schizophrenia has few modern adherents; as Brown and Herrnstein noted some while ago in their textbook on psychology: 'It is important to recognize that double bind communications, considered simply as incongruent or contradictory messages, cannot possibly be a prime cause of schizophrenia. They are simply too ubiquitous' (1975: 677).

What are the consequences of being inadequately dehypnotized?

Another important feature of this case was the allegation that the defendant had not dehypnotized the plaintiff adequately. This was particularly significant in the light of the proposal that an inadequately dehypnotized person may remain in a psychotic-like state. However, the research evidence on this issue suggests that it is not necessary to use a 'dehypnotizing' ritual to end a session of hypnosis (Orne and Evans, 1971). Indeed, if one needed to be instructed by a hypnotist to terminate a hypnosis session, and cancel suggestions, the commonly recognized procedure of 'self-hypnosis' would not be possible.

Nevertheless, one does occasionally come across cases of hypnotic subjects who seem to ignore commands to terminate a hypnosis session. According to Orne (1965), there are two main reasons for this: (a) subjects may feel angry towards the hypnotist and want to get back at him or her; or (b) subjects, for their own reasons, do not want the experience of hypnosis to end (for example, they may find hypnosis a welcome escape or distraction from their problems). Indeed, some of the most famous cases of clients 'remaining in hypnosis' fit well with this rationale (see Kleinhauz and Beran, 1981; Gravitz, 1995). In other words, perhaps it is more sensible to say that failures to terminate hypnosis sessions arise ultimately from decisions made by the subject, rather than from the actions of incompetent hypnotists who allow their subjects to become 'stuck' in a psychotic state.

In sum, although it makes sense in many situations, especially therapeutic situations, to be sensitive when ending the session (it would obviously be insensitive to throw a very traumatized person out of a counselling session just because time is up), beyond this, I can find no scientific evidence to support the view that a perfunctory or even non-existent termination ritual is likely to trigger a psychotic reaction.

Conclusion

We cannot possibly say that all 'hypnotists' or sessions of hypnosis are, or have been, harmless. Bad therapists, insensitive stage show presenters and unethical or unthinking research psychologists can easily degrade, humiliate and cause distress to those

who put their trust in them. Undoubtedly, some people have reported genuine distress during and following visits to hypnotists, and, obviously, all practitioners of hypnosis should be sensitive to, and respectful of, the rights of those on whom they practise. However, I would argue that, on the basis of the available evidence, there is no substantive support for the view that hypnosis procedures, even those that may be distressing to participants, especially predispose anyone to develop schizophrenia or any other form of madness.

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