

Hypnosis and Psychopathology: Retrospect and Prospect

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An editorial introduction to a special issue on hypnosis and psychopathology discusses several links between the two fields. Historically, observation of the parallels between hypnosis and hysteria played an important role in the discovery of unconscious mental processes, the development of psychogenic theories of psychopathology, and the rise of psychotherapy. It is proposed that hypnotic anesthesia and analgesia, amnesia, and posthypnotic suggestion may serve as laboratory models of dissociative phenomena seen in the clinic. Furthermore, hypnosis may be useful in the exploration of processes involved in emotional response and the formation of hallucinations and delusions. With respect to personality and behavior change, hypnosis has commonly been employed in the treatment of pain and habit disorders by means of direct suggestion, but its use is not limited to suggestive therapeutics. Hypnotic relaxation, images and dreams, suggested amnesia, hypermnesia, and age regression may be useful in both psychodynamic and cognitive-behavioral therapies. Possible lines for further research on the relation between hypnosis and both experimental and clinical psychopathology are discussed. A major task for those interested in hypnosis and psychopathology is to foster the integration of their interests and research with the rest of scientific psychology.

Since the controversy between Mesmer and the French Royal Commission in the late 18th century, scientific interest in hypnosis has waxed and waned. Even so, the peculiar alterations in perception, memory, and behavior produced by hypnosis have always caught the attention of at least some psychologists since the time of William James.

In general experimental psychology, Pavlov used hypnosis to illustrate the action of cortical excitation and inhibition; Hull pointed to it as an example of habit formation; Miller, Galan-

ter, and Pribram turned to hypnosis as an example of the operation of plans; and Neisser employed some hypnotic phenomena to demonstrate constructive and reconstructive processes in perception and memory.

In social psychology, hypnosis was an important influence in the development of Sarbin's theory of role taking, the concept of the double bind articulated by Bateson and his associates, and Orne's notion of demand characteristics.

In personality, hypnosis was used as an experimental technique in Luria's investigation of conflict; research on hypnosis and suggestibility provided some of the strands in the nomological net around Eysenck's constructs of neuroticism and introversion-extraversion; Gill and Brenman cited hypnosis as an exemplar of regression in the service of the ego; E. R. Hilgard's programmatic research on the measurement of hypnotizability revealed an important dimension of individual differences in the behavioral domain; and J. R. Hilgard's careful clinical inquiry into the characteristics of hypnotizable and insusceptible subjects

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documented a dimension of imaginative involvement that had been ignored in previous conceptualizations of the structure of personality.

It is in psychopathology, however, that hypnosis has probably had its farthest reaching impact. Many of the 19th century founders of the field studied hypnosis both clinically and experimentally because of the apparent parallels between the phenomena of hypnosis and the symptoms of hysteria. Prior to this time, hysteria had been considered to be a neurological disorder affecting predisposed individuals. The induction of phenotypically similar hypnotic phenomena in normal subjects, simply by the hypnotist's spoken word, led these investigators and others to propose theories of psychological causation that served as correctives to the strong somatogenic viewpoint that prevailed at the time. In the hands of Bernheim, Breuer and Freud, and others, the separation of clinical psychology and psychiatry from neurology and the evolution of "talking therapies" began.

More generally, as Ellenberger (1970) points out, hypnosis played an important role in the discovery of unconscious mental processes. In the early years of the 20th century, Freud's psychoanalytic notion of the unconscious dominated the field, and his early abandonment of hypnosis as a treatment modality meant that hypnotic phenomena were ignored in favor of dreams and parapraxes. Nevertheless, interest in hypnosis persisted as Prince and others continued to study the phenomenon as part of their exploration of the unconscious as conceived by dissociation theory. In the past decade, systematic studies of hypnotic analgesia led E. R. Hilgard to propose a new version of dissociation theory that incorporates observations of unconscious mental activity made in the clinic, the laboratory, and everyday life.

Since its inception in 1906 under the editorship of Morton Prince, the *Journal of Abnormal Psychology* has been an important medium for the publication of empirical and theoretical papers on hypnosis. This special issue collects a group of articles specifically bearing on the relation between hypnosis and psychopathology. Some of the contributions were written at the invitation of the guest editor; several others were submitted through normal chan-

nels and scheduled for publication here; still others were in preparation at the time the issue was conceived, and the authors were encouraged to complete their work in time to be considered for this issue. In this introductory essay, I wish to sketch some of the contemporary issues relating hypnosis and psychopathology in order to provide a background for the other articles.¹

Hypnosis and Experimental Psychopathology: Laboratory Models of Behavioral and Cognitive Disorders

On one level, the relation between hypnosis and psychopathology has always been somewhat ambiguous. To be sure, both domains involve deviant behavior and experience. However, the notion of psychopathology implies not only strangeness and oddness but also a characteristic impairment in functioning that is not present in the individuals who typically participate in hypnosis experiments. Because there is nothing inherently pathological about hypnosis or the people who are hypnotizable,

¹ This essay seeks only to give the reader some flavor for the relation between hypnosis and psychopathology. No attempt has been made to be comprehensive with respect to either topics or references. Hilgard (1965, 1977) provides an excellent overview of the phenomena of hypnosis. The latter monograph places them in a broader context of human behavior and experience and comments on the integration of hypnosis with contemporary cognitive theory. Like most active fields in psychology, a wide variety of theoretical and empirical approaches are applied to hypnosis; these have been sympathetically reviewed by Sheehan and Perry (1976). Some years ago Spanos and Barber (1974) saw appreciable convergence among some of these views, but Hilgard (1973) entered a demurrer, reminding us that there remained many unresolved conceptual differences. This is still the situation today (Coe, 1978; Kihlstrom, 1978). A number of useful anthologies are available covering aspects of hypnosis. Tinterow (1970) collects important early papers on the history of the field, whereas Shor and Orne (1965) emphasize more recent articles that have attained "classic" status. Edmonston (1977) and Fromm and Shor (1979) compliment the present issue by offering other samples of very recent theoretical and empirical work unpublished elsewhere. Recent issues of the *American Journal of Clinical Hypnosis*, 1978-1979, 21(2-3) and the *International Journal of Clinical and Experimental Hypnosis*, 1979, 27(2) gather a number of articles relating to contemporary trends in the measurement of hypnotic susceptibility. Additional specific references may be found in the individual articles contained in this issue.

the links between the two must be found elsewhere. One of these links is certainly pragmatic: As discussed later in this essay, hypnosis has proved useful in treating a variety of disorders encountered in the clinic. Another important link is at the level of basic research: Hypnosis permits the study of subjectively compelling alterations in the behavior and experience of individuals who are not characteristically impaired. Furthermore, these alterations can be induced and removed reliably in a substantial number of normal human subjects under conditions of rigorous experimental control and without trauma or other hazard. Thus, the phenomena of hypnosis may serve as laboratory models for the study of basic psychological processes highly relevant to psychopathology.

Divisions in Consciousness

As noted earlier, clinical observation of the symptoms of hysteria gave rise to the notion of unconscious mental contents—percepts, ideas, and memories that were not represented in phenomenal awareness but that influenced ongoing behavior and experience. In an attempt to understand the psychological processes involved in this syndrome, Janet, Prince, Sidis, and others formulated the concept of dissociation. They held that in the normal personality the individual's thoughts, percepts, and memories were organized into a coherent and integrated whole with all mental contents available to phenomenal awareness. Under certain conditions, however, some of these contents could be split off from the rest. The result was held to be two or more separate streams of consciousness that are neither in communication with nor controlled by the other(s), but that continue to exert an influence over ongoing behavior and experience. The concept of dissociation entailed a rather different view of the unconscious than that portrayed by Freudian psychoanalysis, because it held that the unconscious was not restricted to specific mental contents (i.e., those associated with sexual or aggressive impulses), that unconscious contents could be rational and even creative, and that rendering material unconscious need not be motivated by the desire to reduce or avoid conflict.

With the upsurge of psychoanalysis in clinical psychology and behaviorism in experimental psychology, however, the popularity of dissociation theory quickly declined. As White and Shevack (1942) noted, the final blow to dissociation theory was the evidence provided by many experiments that the ideas, memories, and actions in ostensibly separate streams of consciousness interfered with each other. Thus the "dissociated" streams were not separate after all. Recently, however, Hilgard (1977) has argued that a number of observations in the clinic, laboratory, and everyday life invite some sort of dissociation concept in that they seem to involve parallel processing of different streams of information; a reduction in awareness of particular actions, percepts, and memories; and an apparent lack of voluntary control over behavior and experience. Further, he holds that the concept of dissociation entails only changes in awareness and voluntary control and is actually silent on the matter of interference. Neodissociation theory centers on topics familiar to cognitive psychology, especially the internal processes involved in allocating attention to several tasks at once, constructing percepts and reconstructing memories, and monitoring the contents of the information-processing system.

The phenotypic similarities between the phenomena of hypnosis and the symptoms of hysteria (subjectively compelling disruptions and anomalies in behavior and experience, no evidence of brain insult or injury, behavior inconsistent with reported awareness) suggest that hypnosis may serve as a laboratory model of the clinical syndrome (e.g., Evans, 1979; Sackeim, Nordlie, & Gur, 1979). Hysteria is rather rare, however, and it seems more appropriate to suggest that hypnosis can serve as a vehicle for the study of the broader domain of divisions in consciousness of which hysteria, fugue, and multiple personality are only the most dramatic examples. A wide variety of dissociations are available to the investigator of hypnosis. The "splitting off" of normally conscious experience is prominently represented by amnesia, analgesia, automatic writing, blindness and deafness, and posthypnotic suggestion. The recovery of normally subconscious experiences may be represented by age regression and hypermnnesia.

Each of these phenomena may be induced in hypnotizable subjects and studied both as a topic of interest in its own right and for the light it may shed on the concept of dissociation. For example, Hilgard's systematic studies of hypnotic analgesia showed that suggestions frequently failed to abolish psychophysiological responses to painful stimulation (e.g., Hilgard et al., 1974) and that the pain effectively concealed by the suggestion could be recovered by means of automatic writing and the "hidden observer" method (e.g., Hilgard, Morgan, & Macdonald, 1975). These studies provided the impetus for the original sketch of neodissociation theory.

Other experiments on the performance of simultaneous tasks showed that the degree of interference among them was a function of the attentional demands of the activities and whether one of them was performed outside awareness (Knox, Crutchfield, & Hilgard, 1975; Stevenson, 1976). This work permitted a more detailed analysis of the attentional processes by which divisions in consciousness are produced. Similar sorts of experiments have begun in the domain of hypnotic amnesia (e.g., Kihlstrom, in press). The concept of consciousness is once again important in psychology (Shiffrin & Schneider, 1977), and it seems likely that further study of hypnotic dissociations will contribute to a deeper understanding of the nature and function of consciousness that will be important to understanding certain forms of psychopathology.

Anxiety, Conflict, and Defense

Another early use of hypnosis in the investigation of psychopathology was in the study of conflict and emotion (Luria, 1932), and more recent work has continued in this vein. For example, Levitt and his associates (e.g., Levitt, Persky, & Brady, 1964; see also Levitt & Chapman, 1979) turned to direct hypnotic suggestion as a means of gaining control over the subject's emotional state. They found that rapid induction and termination of the state, easy modulation of the emotional experience as it was occurring, and reduced contamination by irrelevant factors were all possible with hypnosis. With this technique in hand, they explored the psychophysiological correlates of

emotional experience, the influence of emotions on psychological testing, repression, and other concerns.

In a somewhat similar vein, Blum (1967) has developed a "programming" technique in which memories of early experiences involving pleasure or anxiety, for example, are elicited by interviews or projective testing. Under hypnotic control, the content of the experience is then separated from the emotion itself, and the resulting free-floating feelings can be intensified or diminished. In a remarkable series of experiments (e.g., Blum & Barbour, 1979), he and his associates have investigated the influence of emotional state on perception and memory.

A rather different technique for studying conflict, anxiety, and defense involves the hypnotic implantation of a paramnesia, or false memory. In this procedure, hypnotized subjects are led through a contrived emotional experience; the hypnosis is then terminated with a suggestion for amnesia. Working within an explicitly psychoanalytic framework, Reyher and his colleagues have conducted a number of studies on the effects of conflict over matters of sex and aggression (Reyher, 1962, 1967; see also Silverman, 1976). Early studies dealt with the eruption of symptoms of anxiety and other disturbances of affect, and the perception and recognition of conflict-related words presented by means of a tachistoscope. Later studies have examined the effects of guilt over the conflict, awareness of the forbidden impulse, and the relation of specific defenses to the emergence of symptoms (e.g., Sommerschild & Reyher, 1973).

Hallucinations

Most psychologists agree that hallucinations are products of the imagination that are closely related to ordinary mental images (e.g., Horowitz, 1975; Sarbin & Juhasz, 1975). Following the analyses of Neisser (1967, 1976) and Reed (1974), it seems likely that mental images are active constructions based on information available in memory. Often these images represent the anticipatory phase of perceptual activity, schemata that under ordinary circumstances guide the pickup of information from the environment; however, these schemata can

also be detached from the perceptual cycle, functioning as products of pure imagination. These processes may be understood by means of the conventional study of mental images, which is now well advanced (Kosslyn, 1978; Shepard, 1978).

The difficulty arises in understanding how this constructive activity can be separated from executive monitoring and control, so that the individual does not notice that he or she has formed an image and comes to attribute the percept to an external stimulus object rather than to internal constructive activity. These processes may be understood only by direct examination of hallucinations themselves. Here hypnosis seems to offer the investigator a very useful analytic medium. Hypnotic positive hallucinations are not abolished by strong honesty demands as hallucination reports collected under other circumstances are (Bowers & Gilmore, 1969; Spanos & Barber, 1968), and the hallucinations of hypnotized subjects are different from those of subjects who are simulating hypnosis (Orne, 1959; Sheehan, 1977). Hypnotically induced hallucinations seem to possess the same qualities of subjective conviction as those hallucinations observed in the clinic.

Hilgard's (1977) neodissociation theory provides a conceptual framework for understanding the qualities of positive hallucinations that distinguish them from more usual types of mental images. For example, it may be that the image is formed subconsciously, unmonitored by the executive structure in the cognitive system. Although certainly the product of constructive activity on the part of the subject, this activity is not represented in phenomenal awareness. This subconscious image formation is experienced as being involuntary and then, perhaps, attributed to external sources. (A related attributional account of delusions will be found below.) At present, however, this account is entirely speculative; systematic study of the cognitive processes involved in hallucinatory experiences is required.

It is already known that the response of hypnotized subjects to suggestions for positive hallucinations is related to the vividness of their mental imagery in the normal waking state (Hilgard, 1970). The processes by which ordinary images are formed are therefore im-

plicated in the formation of hypnotic hallucinations. The unique contribution of research on hypnotic hallucinations will be a better understanding of why hallucinations are experienced as involuntary and external in origin.

Delusions

Delusional thinking, another common symptom of psychopathology, has been the subject of much theoretical speculation. An interesting recent analysis of schizophrenic delusions by Maher (1974), for example, holds that delusions arise as an individual suffering from some psychological deficit attempts to account for his or her unusual perceptual-cognitive experiences. The schizophrenic, functioning like any other naive scientist, begins to generate hypotheses concerning the nature of the experience, the reason that he or she alone has it, and the reason for its happening at all. In the absence of any other information, the affected individual may conclude that he or she is being punished for some past sin, victimized by some outgroup, in communication with alien beings, or in possession of supernatural powers. The development of a coherent hypothesis, especially one that does not fail any crucial empirical test, leads to the relief of anxiety. Maher's account of delusions is consistent with modern attribution theory, but there is little research evidence bearing directly on the hypothesis.

Recent hypnosis research by Maslach, Zimbardo, and Marshall (1979) extending the work on cognitive-physiological interactions in emotion by Schachter and Singer (1962) has independently provided such evidence. Earlier, Marshall and Zimbardo (1979) had attempted an exact replication of the Schachter-Singer experiment and found that unexplained arousal consistently produced a negative emotional state rather than the "plastic" emotions discussed by Schachter and Singer. Maslach (1979) extended this work, employing hypnosis to manipulate arousal because it offered better experimental control and eliminated other problems associated with the use of drug treatments. Again, she found that unexplained arousal produced negative states.

More important for present purposes, Maslach (1979) observed that the majority of subjects in the unexplained arousal condition made

some specific (albeit incorrect) causal attributions regarding their subjective experiences. For example, subjects might state that they were tense because of upcoming exams, the experimental procedure, or the confederate's behavior. When the subjects were in the presence of a hostile confederate, their stated reasons for feeling bad paralleled those given by the stooge for being angry. Maslach et al. (1979) suggest that anomalous subjective experiences produce anxiety precisely because they are unexplained and threaten the person's sense of self-control and that the individual's search for causes is biased by his or her past experiences and customary ways of thinking. Paralleling Maher's (1974) argument, it might be said that these causal attributions are the stuff of which delusions are made. Because hypnosis provides an easy way of inducing anomalous perceptions, memories, behaviors, and internal states in hypnotized individuals, we may expect to see more use made of the technique in the study of the processes involved in the genesis and maintenance of delusions.

Comment

The exploration of laboratory models of psychopathology has a long and distinguished history and has yielded valuable insights into the nature of abnormal behavior and experience. In the past, most of these models have centered on paradigms drawn from animal learning and psychopharmacology. It seems likely that hypnosis can provide additional laboratory models with which to study dissociative processes, hallucinatory experiences, and the formation of delusions. If the modeling agenda is to succeed, investigators must move beyond mere "demonstration" experiments and begin to analyze the underlying psychological processes in detail.

At the same time, it should be emphasized that there are constraints on the degree to which information gained from laboratory models may be generalized to naturally occurring psychopathology. The motivations associated with dissociative experiences, for example, are clearly different in hypnosis and hysteria. Whereas psychopathology is typically unbidden and unpredictable, laboratory phenomena—whether hypnotically induced or a product of other kinds of manipulations—are episodic

in nature and the product of an interaction controlled by an implicit contract between the experimenter and the subject (Orne, 1962, 1973). Thus, even if the laboratory investigator were to produce an exact replica of the surface features of some symptom or syndrome, there would be no guarantee that the individual's response to it, or to experimental or therapeutic manipulations, would match that seen in the original. The experimental context threatens, but does not destroy, ecological validity. It is crucial that investigators take account of the contextual alterations involved in moving back and forth between the laboratory, the clinic, and the real world.

Hypnosis and Clinical Psychopathology: Behavior Modification and Personality Change

The rise of scientific hypnosis corresponded with the rise of the psychotherapy movement in the late 19th century, and the resurgence of interest in the topic among researchers followed the reintroduction of hypnosis to clinical practice in World War I and again in World War II. Since that time, hypnosis has found a place in both dynamic and cognitive-behavioral therapies.

Beyond Placebo Therapy

There is some tendency among clinical practitioners to view hypnosis as placebo therapy—a treatment that yields no specific therapeutic effect, but gains its power by virtue of the "magic" associated with it in popular culture and the image of scientific expertise communicated by those who practice it. In this view, hypnosis is a potent therapeutic agent because the patient (and perhaps the doctor as well) believes it is, much as a sugar pill labeled as a powerful analgesic agent results in pain relief.

There is indeed some evidence that hypnosis, like all therapeutic agents, has a placebo component. For example, a series of studies on the transcendence of voluntary capacity showed that hypnotic suggestions, delivered in an environment in which they were made plausible, effectively enhanced the physical performance of laboratory subjects who were unsusceptible to hypnosis (London & Fuhrer, 1961; Rosenhan & London, 1963). Similarly, a study of

laboratory pain found that hypnotic suggestions for analgesia led to a significant reduction in felt pain for insusceptible subjects who had been previously led to believe that they could successfully respond to such suggestions. This decrease was comparable to that observed when the subjects ingested a placebo capsule (McGlashan, Evans, & Orne, 1969). In the clinic, Lazarus (1973) found that labeling a relaxation procedure as hypnosis yielded better results than leaving the identical procedure unlabeled.

In the pain study by McGlashan et al. (1969), however, hypnotizable subjects obtained significantly more pain relief from hypnosis than from placebo, and a study by Slotnick, Liebert, and Hilgard (1965) indicated that under some conditions hypnotizable subjects can experience a greater increase in physical capacity than insusceptible subjects. Thus hypnosis appears to be more than a placebo, at least for hypnotizable subjects. Placebos can be very powerful indeed (Evans, 1974), and although they can be harmful when purveyed by charlatans, under appropriate conditions they can also be very important therapeutic tools. Hypnosis, like any other therapeutic procedure, certainly has placebo components, and the skilled clinician is correct in maximizing them in order to insure the successful outcome of treatment. But it is wrong to argue that hypnosis is *only* a placebo. Hypnosis is more than merely a plausible agent of behavior change, and the hypnotic interaction does more than simply manipulate situational demands. Rather, hypnosis permits the practitioner to employ a number of specific techniques derived from empirical research to achieve specific effects determined by a careful consideration of the requirements of the individual case. It is to these specific applications that we now turn.

Suggestive Therapeutics

The earliest therapeutic use of hypnosis involved direct suggestion for symptom relief or attitude change. This technique was the cornerstone of the Nancy school of Liebeault and Bernheim, the chief competitors of Charcot at the Salpêtrière, and was employed by Freud in his early practice. Symptom removal via suggestion has continued to be widely and successfully employed, particularly in the context of pain (Hilgard & Hilgard, 1974) and behavioral

medicine (Barber, 1978; Bowers, 1977; Bowers & Kelly, 1979). In these areas, therapeutic efficacy is correlated with the patient's ability to experience hypnosis, indicating that hypnosis has specific effects on the problem, and there appears to be no evidence of symptom substitution. More recently, hypnosis has come to be used in the treatment of fears and habit disorders such as smoking, alcohol abuse, and overeating. In these domains the relation of outcome to hypnotizability seems to depend on the manner in which hypnosis is used. (Horowitz, 1970; Perry, Gelfand, & Marcovitch, 1979).

On the surface, neither the therapeutic efficacy of suggestions administered to hypnotizable individuals nor their failure when given to those who are insusceptible is particularly puzzling. Nevertheless, findings of successful or unsuccessful outcome are not enough. The scientist-practitioner wants to understand the processes responsible for the success or failure of a treatment technique, and here the questions quickly become quite complex. Part of the answer lies in the nature of hypnosis—that is, with the extra leverage that intense role involvement and divided consciousness can provide. But part of the answer is also motivational: Response to hypnosis reflects both aptitude and attitude components, and even hypnotizable subjects will not become hypnotized if they do not wish to be. Similarly, studies of posthypnotic suggestion and the hypnotic coercion of antisocial behavior clearly argue against the proposition that hypnosis has any special power to compel behavior against the individual's will. Moreover, hypnotic suggestions given to insusceptible individuals may have substantial placebo effects, provided that they are plausible to the patient and delivered enthusiastically and convincingly by the hypnotist. Finally, it is clear that hypnotic treatment (or any other treatment, for that matter) may on occasion simply provide a convenient excuse for personality or behavior change.

Psychodynamic Therapy

Despite Freud's rejection of hypnosis, the technique has long held a place as an adjunct to psychoanalysis and other forms of psychodynamic therapy in the exploration and uncovering of the factors responsible for symptom

formation. For example, Brenman and Gill (1947) cited with approval the use of hypnosis in the abreaction of traumatic experiences, recovery of forgotten events, and the forgetting of distressing ones. They also noted that automatic writing might help to sustain an interaction with an otherwise uncommunicative patient, and that hypnotic dreams might prove to be a rich source of interpretable material. Finally, they noted the then novel tendency of some clinicians to conduct entire analyses with the patient hypnotized, ostensibly reducing the time required for treatment. Hypnoanalysis remains popular, and more recently Wolberg (1967) has suggested that it might be especially beneficial when the patient lacks motivation for treatment; has erected barriers to the development of a good working relation with the therapist; is unable to verbalize, associate freely, or remember dreams; has repressed traumatic memories; or resists producing new significant material.

Although there are no systematic clinical trials or comparative studies of hypnoanalysis or dynamic hypnotherapy, some experimental literature supports the assumptions behind these developments. For example, it appears that hypnosis can enhance memory for meaningful material to some degree (Dhanens & Lundy, 1975), although there is the danger that at least some of the material elicited in this manner may be entirely confabulated (Stalaker & Riddle, 1932).

Similarly, although there is little evidence supporting the notion that hypnotic age regression entails an actual return to childhood modes of functioning, several well-documented cases of the return of forgotten childhood languages (e.g., Fromm, 1970) as well as a recent experiment on emotional responses (Nash, Johnson, & Tipton, 1979) suggest that forgotten memories and attitudes might well be recoverable with the technique. Of course, hypnotically elicited material may be a source of clinically relevant information independent of its truth value. To the extent that the age-regressed individual is able to become absorbed in the child role, it seems possible to gain at least temporary benefits from substituting pleasant images of the past for the troubles of the present.

There is also a correlation between hypnotiz-

ability and the ease of production of creative ideas, and some evidence as well that the induction of hypnosis enhances creative thinking and insight (Bowers, 1979; Bowers & Bowers, 1979). Finally, although the hypnotic dream is physiologically distinct from the night dream, and the critical awareness remaining in hypnosis offers more opportunity for censorship of the ongoing fantasy, hypnotic dreams seem rich enough to make interpretive efforts reasonable (Barrett, 1979; Hilgard & Nowlis, 1972).

In general, then, hypnosis can aid dynamic therapy by virtue of the amount of control it permits over the behavior and experience of appropriately selected individuals. With it, important affects, ideas, and memories can be brought to life in the consulting room, rather than just discussed retrospectively, providing both parties with a better opportunity to appreciate the psychological aspects of the patient's situation.

Cognitive-Behavioral Therapy

Hypnosis has not been neglected in the development of behavioral and cognitive alternatives to psychoanalysis and other forms of dynamic psychotherapy (Dengrove, 1976; Lazarus & Karlin, 1978). Following early suggestions by Wolpe (1958), many classical behavior therapists have employed hypnosis to facilitate relaxation and imagery during systematic desensitization. However, early analogue and clinical studies found no difference in outcome or extent of relaxation achieved between desensitization attempts employing progressive relaxation and those employing hypnosis. Furthermore, a few experimental studies also seemed to show that waking conditions were as effective as hypnotic suggestions in producing auditory and visual hallucinations. These results dampened some practitioners' enthusiasm for the technique (e.g., Ascher, 1977). However, the patients in these early studies were randomly assigned to the treatment groups without regard for their ability to experience hypnosis. It is likely that hypnosis did facilitate relaxation and imagery in those patients and subjects who were hypnotizable and that these effects were obscured by the lack of an effect in insusceptible subjects. Moreover, there is new evidence that

hypnotic suggestions produce images and hallucinations that are more subjectively compelling than those produced by waking imagination. When employed with individuals who are at least moderately hypnotizable, then, hypnotic procedures may provide substantial benefits.

Because cognitive-behavioral interventions are dynamically sensitive, some of the hypnotic procedures employed by behavior therapists have their roots in the suggestive therapeutics and hypnotherapy movements discussed earlier. For example, Wolpe (1973) does not advocate the simple removal of symptoms by means of suggestion, but he has noted that hypnotic suggestions may effectively oppose behavioral symptoms. Similarly, Lazarus and Karlin (1978) hold that direct suggestion and regression can be effective in eliciting emotional arousal and modulating perceptual experience as well as in creating specific amnesias. Wolpe has also suggested that hypnotic hypermnesia and age regression may facilitate the process of abreaction and desensitization.

For example, in an analogue study of snake phobias by Horowitz (1970), hypnosis was employed as an adjunct to a variant of flooding. One group was asked to recall snake-related events and also to reexperience the early fear. Another group was also asked to recall the events, treat the emotion as irrelevant, and keep it in the past. A third group received a posthypnotic suggestion that they would no longer be frightened by harmless snakes. Assessed on a behavioral measure of approach to an actual harmless snake, all three methods led to a significant decrease in fear compared to untreated controls. The "relaxation" procedure gave the best results of all, showing the potential benefits of hypnotic dissociation between memories and related emotions. Treatment outcome was positively correlated with hypnotizability in both memory conditions, indicating that hypnosis played an active role in the therapeutic change. Contrary to expectation, the individuals in the posthypnotic suggestion condition also improved, but there was no correlation between outcome and hypnotizability, suggesting that the active ingredient was actually nonhypnotic in nature.

More recently, Frankel (1976) has proposed that hypnosis be used to produce artificial

symptoms in the consulting room that are analogous to the patient's actual complaint. The patient thus has the opportunity to become familiar with the model symptom so that the pathological ideas and actions become less frightening. By producing and eliminating the artificial symptom at will, he or she gains a sense of mastery over an experience that was once perceived as ego-alien and out of control. Thus, hypnosis becomes an active part of the coping process. Frankel's technique contains elements of the laboratory modeling approach described earlier and brings us full circle to couple the experimental and clinical aspects of hypnosis and psychopathology.

Comment

The use of hypnosis in psychotherapy and behavior modification appears promising, but most of this promise is based on laboratory experimentation and anecdotal case reports rather than controlled clinical trials. There are a number of issues that bear further investigation. For example, it is necessary to distinguish between the placebo and specific effects of hypnosis in a therapeutic context and to examine more closely the mechanisms underlying both effects. In most applications, hypnosis will continue to be employed as an adjunctive technique rather than as an agent of change in its own right. As is the case with other forms of psychotherapy, hypnosis is no panacea. More information is needed concerning the kinds of people and situations in which its use is appropriate or contraindicated. Of special importance is greater acknowledgment of individual differences in hypnotizability. In this context, the development of abbreviated testing procedures suitable for assessing hypnotic susceptibility in clinical situations (Morgan & Hilgard, 1978-1979a, 1978-1979b) will make some of the necessary research practicable for the first time. Additionally, the potential of hypnosis for controlling cognition and affect suggests new variants on old techniques. Clearly there is a good deal of research to be done before hypnosis can assume its proper place in the therapist's repertoire.

Overview of the Special Issue

This issue of the *Journal of Abnormal Psychology* contains a representative selection of

theoretical and empirical articles relevant to the relation between hypnosis and psychopathology. There are several topics and individual lines of investigation that are not covered in the studies that follow. Nevertheless, the articles range widely over the phenomena of hypnosis, and each has implications for the understanding and treatment of psychopathology. It is hoped that the material that is included will convey some idea of current trends in the field.

Conceptual Overviews

One of the hallmarks of hysterical blindness is the apparent paradox between the patient's complaint of loss of sight and behavioral evidence indicating that visual function remains intact. Sackeim et al. (1979) review the literature on functional blindness and reveal a further paradox: Behavior is inconsistent with reported awareness only in some cases. They propose a model of hysterical blindness that combines the cognitive features of dissociation theory with the motivational features of psychoanalysis. By relating hypnotic blindness to the hysterical symptom, they revive an early interest in the relation between hypnosis and hysteria. They suggest using the hypnotic phenomenon as a laboratory model of the clinical syndrome and present interesting case material suggesting what such an experiment would look like. As indicated earlier, hypnosis and hysteria are not the same, so the analogy should not be pushed too far. Nevertheless, despite its rarity hysteria raises interesting questions about psychopathology that may be usefully addressed within the hypnotic context.

Psychosomatic disorders raise some of the same issues as hysteria, in that psychological factors such as stress are shown to have consequences for somatic functions. Bowers and Kelly (1979) review some of the recent research in this area, revealing the role of stress in physical illnesses of all kinds and the possible involvement of the immunological system in mediating stress reactions. They then examine the results of hypnotic treatment of physical illness, which sometimes are remarkable indeed. The correlation of outcome with hypnotizability, obtained in cases of warts and asthma, underscores the importance of individual differences and indicates that hypnosis is having

some specific effect on these disorders. Bowers and Kelly argue that the physiological consequences of the perception of stress, and the efficacy of "mere words" in reversing them, raise the old mind-body problem in a new form that can be profitably pursued by scientific investigation.

One of the most important trends in contemporary hypnosis research is the incorporation of hypnosis into theories covering a wider range of psychological phenomena. Neodissociation theory is one of these; Sarbin's role theory is another. In their contribution to this issue, Sarbin and Coe (1979) argue that hypnosis and psychopathology are linked at the behavioral level by counterexpectational and contranormative conduct. They hold that a role theoretical account of these phenomena, in which people are construed as actors responding to the demands and contingencies of the social context, is more appropriate than the cognitive or biological accounts that dominate in both fields. An interesting feature of role theory has been its continuing attempt to eschew mentalistic constructs at a time when psychology has become thoroughly cognitive. A new feature of the evolving theory, not presented in detail previously, is a distinction between "doings" and "happenings." Role theory is implicitly limited to the former, indicating that a contextualist analysis does not attempt to provide a complete account of phenomena in either domain.

Of course, the contemporary phenomena observed in both the hypnosis laboratory and the clinic do not occur in a vacuum and are shaped in important ways by the ever-changing social context. Modern hypnosis does not resemble the epileptiform seizures observed by Mesmer, the frequency of diagnosis of multiple personality is on the upswing, and delusions now involve aliens and spies instead of devils and witches. Spanos and Gottlieb (1979) apply a social-psychological approach similar to Sarbin's in their attempt to understand the historical relations between demonic possession, hysteria, and mesmerism. They delve into a rich mass of historical material dating from the 16th century to show that the features of the three states and the reciprocal role relations involved have much in common. Spanos and Gottlieb argue cogently that mesmerism, aris-

ing at the height of the Enlightenment, represents a secularization of demonic possession and exorcism. Some puzzles still remain for historians to pursue, however. Chief among these is the unexpected occurrence, in an environment containing strong demands for convulsive crises, of somnambulistic states. The accidental discovery of artificial somnambulism suggests that there is a core dissociative phenomenon, observed in hypnosis as well as in certain forms of psychopathology, that is not a product of social and cultural factors.

Empirical Studies

The phenomenon of age regression, in which an adult subject behaves in a childlike manner, has long puzzled investigators of hypnosis. One popular notion, that the hypnotized subject actually reverts to modes of functioning characteristic of childhood, received some support from early studies employing developmental tasks. Later studies, however, either failed to replicate the original findings or suggested that they were artifacts of the demand characteristics of the experimental situation. Still, many of these studies have shown that hypnotic behavior differs from simulation and that the subjects find the regression experience subjectively compelling. Nash, Johnson, and Tipton (1979) find that age-regressed subjects placed in a moderately frightening situation behave in a manner appropriate to their suggested age, whereas simulating subjects do not. These are the first positive results from a comparative study of real and simulating subjects on a developmental task. Whether the regression performance is best construed as a reinstatement of childhood modes of functioning or as a revivification of childhood memories is a theoretical issue that can only be resolved by further research. Still, the experiment shows that childlike behavior remains available to the adult and may be used in either an adaptive or a maladaptive manner. Such compelling childlike role enactments, whether strictly veridical or not, may be very useful in clinical situations.

Posthypnotic amnesia is also a prominent topic in hypnosis research. This topic is highly relevant to psychopathology because of the parallels between the hypnotic phenomenon and a wide variety of functional disorders of

memory encountered in the clinic. Evans (1979) expands on previous work that documented two forms of amnesia: recall amnesia, in which the subject cannot remember the events and experiences that transpired during hypnosis, and source amnesia, in which the subject retains access to certain information but cannot remember the hypnotic circumstances under which it was acquired. The present experiment employs simulators to show that source amnesia is not an artifact of subtle demand characteristics. Evans argues that the phenomenon represents a dissociation between episodic and semantic memory and links it to both cryptomnesia (unconscious plagiarism) and to clinical cases in which the sequelae of a traumatic event persist in the absence of memory for the experience itself.

One of the few established personality correlates of hypnotic susceptibility has to do with the components of "creativity": imaginative involvement, mental imagery, and divergent thinking. In a series of studies, some involving practicing creative writers, Bowers (1979) analyzes this statistical relation extensively and finds that the burden is carried by a construct named "effortless experiencing." That is, hypnotizable individuals may not be more creative, but they do tend to produce creative ideas more easily. In extreme cases, the ideas seem to appear nonvolitionally—an observation that again raises the issue of subconscious mental processes. The cognitive link between hypnosis and creativity seems to be nonanalytical, holistic thinking, and at a physiological level, the nondominant brain hemisphere seems to be implicated. Interestingly, other research shows that gestalt closure ability and a preference for activating the nondominant hemisphere also correlate with hypnosis. Thus, Bowers' work fleshes out a nomological net that unites hypnosis, nonhypnotic involvements, cognitive style, and brain function. The work also reveals the intricate relations between individual differences and task structure that are central to the study of creative thinking and insight.

Within either laboratory or clinic, hypnosis occurs in the context of a dyadic relation in which one individual responds to suggestions offered by another. Sheehan and Dolby (1979) have developed a novel paradigm for assessing

the subject's involvement with the hypnotist that involves pitting two sets of competing demands against each other. In the present experiment, these assessments are shown to be related to the subjects' perception of hypnosis and the hypnotist, as revealed in a content analysis of hypnotic dreams. The involvements documented here do not resemble archaic, regressive transference as conceptualized by classical psychoanalysis, because the authority of the hypnotist is contractual rather than parental. Nor does the Sheehan-Dolby analysis reduce hypnotic behavior to pleasing the experimenter. Motivated involvement sets the stage for the hypnotic interaction and shapes the experience as it unfolds, but hypnosis also entails other abilities and cognitive processes. Thus, there are aspects of affective involvement and the experimenter-subject relation that distinguish hypnosis, task motivation, and waking imagination. At a practical level, Sheehan and Dolby suggest a set of convenient assessment procedures that may be useful in assessing the clinical patient's readiness to respond to therapeutic suggestions.

Hypnotic dreams can be used to study other things besides hypnosis. When they are employed as a method to study the individual's fantasies, as they often are in the clinic, it is helpful to have some understanding of how hypnotic dreams relate to the individual's imaginative activities in ordinary waking life. Barrett (1979) reports the first direct comparison of hypnotic, day, and night dreams taken from the same subjects. The results show striking similarities in content between hypnotic and night dreams, although both differ from daydreams, at least for those who are highly hypnotizable. There is also the suggestion of rapid eye movement activity in the hypnotic dreams of highly hypnotizable subjects which needs to be confirmed psychophysically. Like the research of P. G. Bowers, Barrett's work shows a way in which hypnosis can be used during the clinical hour to elicit rich fantasy material of potential value to the clinical enterprise.

It seems obvious that the outcome of hypnotic treatment should be correlated with hypnotic susceptibility, and as noted earlier this has been the finding in clinical studies of pain and physical disease. Perry et al. (1979), how-

ever, report several studies of smoking in which the expected correlation did not emerge. Rather, the important correlate of outcome was the patient's motivation to quit or continue smoking. Because of the great differences in both the nature of the problem and the hypnotic treatment applied, the findings with smoking do not really contradict those with pain and physical disease. It is possible that the expected correlation would emerge with an intervention that made use of the altered perceptions that lie at the core of hypnosis. The study calls for similar research on a variety of other disorders and problem areas. The final result should be an increased ability of clinicians to tailor their use of hypnosis to both the nature of the presenting complaint and the characteristics of the individuals involved—necessary features of scientifically based clinical practice.

Integrating the Normal and the Abnormal in Hypnosis and Psychopathology

It has been noted that hypnosis and psychopathology are linked by a number of elements. The fields share a great deal of history, extending back a century to the beginnings of scientific psychology. Experimentalists in both fields are attempting to understand the processes underlying unusual behavior and anomalous experiences, disorders of perception and memory, and related personality processes. Finally, practicing clinicians, whether they use hypnosis or not, are interested in understanding the factors responsible for personality and behavior change. These considerations provide strong reasons for researchers in hypnosis and psychopathology to continue to be interested in each others' work. The two fields also share a common future. It is clear by now that neither hypnosis nor psychopathology stands at the periphery of scientific psychology looking on while striking advances in knowledge are made in other subdisciplines. Whether the investigator takes a cognitive, developmental, social, or physiological perspective, work in both hypnosis and psychopathology is rapidly becoming part of mainstream psychological research.

At present, however, the interactions between the "normal" and the "abnormal" in

psychology as a whole are far from common. A major task for investigators interested in both hypnosis and psychopathology will be to work harder to integrate their research with that of their colleagues in other areas of psychology. It is to be hoped, moreover, that this integrative effort will be bidirectional. The scientific study of hypnosis and psychopathology will advance to the extent that it draws on the concepts, methods, and findings derived from the study of "normal" individuals and "normal" states, but it is also likely that research in these areas will make its own special contribution to the understanding of normal cognitive, social, personality, developmental, and physiological processes. To the extent that this integration is achieved, we will have edged much closer to the comprehensive scientific understanding of human behavior and experience that we all are seeking.

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