

Research in Psychedelic Drug Therapy: A Critical Analysis

ROBERT E. MOGAR, Ph.D.

My decision not to participate in this most distinguished and influential conference was a consequence of a broader decision to withdraw entirely from further attempts at psychedelic research. In the light of progressive developments in this area, the decision was in large part made for me. Thus I do not consider my decision at all remarkable, nor my withdrawal from the conference particularly noteworthy. The following comments concerning my reasons for terminating research with psychedelics were prompted by the unanticipated reaction of friends and colleagues, including a number of conference participants. The bulk of this discussion, however, will focus on the current status of research in psychedelic therapy since the major problems and issues in this area were instrumental in my decision and may possibly serve as a stimulus for conference discussion.

As a basic research tool or as a potentially valuable therapeutic intervention, the psychedelic drugs offer a most fascinating and significant field of investigation. Unfortunately, the present social climate is oppressive and shows every sign of becoming more so—not necessarily negative but restrictive and distracting to the investigator. Within the healing professions and social sciences, unnecessary restraints and prejudice (pro and con) are less blatant but no less resistant to reason and evidence. Whether zealous or subtle, detractors and advocates have contributed equally to the present confusion. Since no one lives in a cultural or scientific vacuum, literally

all the work and commentary to date have been strongly influenced by the sensationalism and controversy generated by psychedelic drugs. Although operative to some degree in all scientific endeavors, cultural and personal biases toward psychedelic phenomena have grown to absurd heights, obscuring almost totally the substantive empirical issues. Studies that are bold and imaginative as well as systematic and reasonably objective are not likely to be conducted in the foreseeable future. Attempts to research or discuss psychedelic states in a spirit of open inquiry quickly deteriorate into “which side are you on.”

Some of the reactions (and suspicions) prompted by my withdrawal underscore the absurdity of the present climate. It is embarrassing but apparently necessary to point out that (a) I do not take LSD regularly or even frequently, (b) I do not consider the psychedelics a panacea for men's ills nor a menace to civilization, (c) I am as sane as I ever was, (d) neither my personal reputation nor my professional status has been jeopardized, and (e) I did not obtain “negative results” in my research. The major reasons for withdrawing are far more mundane, namely, (a) the increasing difficulty in maintaining a Food and Drug Administration permit to research LSD and Mescaline, (b) the unlikelihood of ever obtaining support from federal granting agencies, (c) an unearned and unwanted notoriety—the incessant demand for public appearances, statements, and articles, and most important, (d) I have inadvertently become caught up in the legal, social, and ethical

issues (valid and contrived) which are time consuming and lethal to primary research activity.

The institutional deterrents to creative research, well documented in recent years, are multiplied a thousandfold in controversial areas. The meager evidence that might be considered valid accumulated during 25 years of concerted study certainly warrants professional embarrassment. It is instructive in this regard to compare psychedelic and sensory deprivation research since the phenomena are remarkably similar. Although isolation studies got underway almost 10 years after the discovery of LSD-25, research in the two areas contrast sharply in diversity, quality, and yield.

The little we have learned about psychedelic states has been well aired in both scientific journals and the popular press, richly supplemented with inaccurate and exaggerated accounts of illicit drug usage. This practice will continue to be a source of titillation and diversion for an avid public. LSD has become a lucrative (and lurid) commodity of the mass media and as such is rapidly becoming assimilated and devitalized like countless novelties before it. Exaggerated accounts of extraordinary experiences, positive and negative, become self-fulfilling prophecies. Latent hopes and fears are given another temporary focus. Irrational laws and esoteric cults fill the vacuum created by professional inertia and rigidity. It seems unlikely that conferences like the present one can counteract such persuasive agents of influence. It is also doubtful that competent, open-minded investigators can reclaim psychedelic states as a "neutral" class of events. Even if the professions and federal agencies were more supportive, it would be extremely difficult to think clearly and work productively in this area. In short, it is presently impossible to adopt the ideal attitude for psychotherapy researchers recommended by Strupp (1962): "Work as though every-

thing depended upon it, but don't care about the result."

THE PSYCHEDELIC RESEARCH PROGRAM AT MENLO PARK

In the course of 5 stormy years, over 600 patient-subjects have been given psychedelic therapy at the International Foundation for Advances Study at Menlo Park, California. Although assessment procedures have been revised periodically, the treatment regime has been relatively invariable (Savage, Fadiman, & Mogar, 1966). Following psychiatric screening, psychological testing, and an average of six preparatory interviews which included inhalations of 70% oxygen and 30% CO₂ according to Meduna's method (1950), each subject underwent a single, large dose LSD session conducted in a comfortable, aesthetically pleasing setting. The therapist present provided companionship but not interpretation. The day was spent listening to music or viewing various visual stimuli, for example, family photographs. Following the 8 to 10 hour psychedelic experience, the patient was seen for an average of four follow-up interviews.

The nature, extent, and duration of effects both during and subsequent to the LSD-induced state were extensively evaluated using a variety of assessment procedures including standardized psychological tests, *Q* sorts, self, therapist, and independent ratings, tapes of sessions, and behavior change schedules.

All patients volunteered for the program and bore the medical costs of treatment. Approximately 40% of those applying were rejected because of psychotic tendencies, cardiovascular disease, or paranoid reactions. Candidates with unsettled life circumstances (e.g., a pending divorce) or poor motivation were also excluded. With few exceptions, the resultant sample met Strupp's (1962) description of the preferred patient for psychotherapy. They were:

young, attractive, well-educated, members of the upper-middle class, possessing a high degree of ego strength, some anxiety which impels them to seek help, no seriously disabling neurotic symptoms, relative absence of deep characterological distortions and strong secondary gains, willingness to talk about their difficulties, ability to communicate well, some skill in the social-vocational area, and a value system relatively congruent with that of the therapist; such patients also tend to remain in therapy, profit from it, and evoke the therapist's best efforts [p. 323].

And so it has been. Concerning the rhetorical question of treatment outcome, the results have indeed been positive. Employing the most reliable, comprehensive, and measurable criteria available, our batting average has been consistently high (Mogar, 1966; Mogar & Savage, 1964; Savage et al., 1966). Given the inherent attractiveness of the program, the necessary sample restrictions, and the strongly positive and congruent patient-therapist expectancies, such findings are neither surprising nor particularly interesting.

One of the most significant consequences of the 1961 Research In Psychotherapy Conference has been the shift away from simplistic outcome studies, that is, variations on the theme: "does this or that psychotherapy work; does one work better than the other?" Instead, the current focus is on what pre-treatment and treatment conditions facilitate particular outcomes. For research purposes, various measurable outcomes are viewed nonjudgementally as a function of specifiable and manipulable process variables. As Betz (1962) pointed out, "actual outcome is the essential, logical criterion for evaluating what conditions are or are not effective in psychotherapeutic effort." In her words, the key empirical questions become: "Psychotherapy of whom?" "By whom?" "To what end?"

There have been countless reports of short-term, global improvement rates following psychedelic therapy. Almost nonexistent, however, are data on the dif-

ferential efficacy of a given technique for meaningful patient subgroups. The meager evidence available is particularly distressing regarding the single high dose method of psychedelic therapy. Viewed as a form of treatment or as a set of experimental conditions, the brevity and uniformity of this method offer distinct advantages over most psychotherapies. Most important, process variables are less complex and more readily controlled or varied systematically (e.g., nature and frequency of antecedent contacts; situational and therapist variables during the psychedelic session).

The Menlo Park research program was designed to provide some tentative data on the key process-outcome relationships in psychedelic therapy. Given consistently high motivation for this particular form of self-improvement, and a relatively constant therapeutic regime, the relevant independent variables necessarily became (a) relatively stable personal-social characteristics of the patient, and (b) various dimensions of response during the drug experience. The dependent variables, of course, were multilevel outcome indices including changes in values and beliefs, attitudes and personality, and actual behavior in major life areas. In addition to the nature and degree of change in the dependent variables, their duration or stability over time has received continual evaluation (18 month follow-ups are currently in progress). Because of the brevity of the psychedelic program, long-term follow-up is particularly important. Whether or not changes that are often dramatic and profound will dissipate as readily as they occur is a question frequently debated but never adequately researched.

As interrelated aspects of treatment outcome, variations in the nature, magnitude, and duration of changes—positive and/or negative—are a function of pre-treatment individual differences and uncontrolled process variables. As reported previously, differential outcomes are sig-

nificantly related to patient belief systems, personality, severity of illness, and model defense patterns (Mogar & Savage, 1964; Savage et al., 1966). With regard to stability over time, 6- and 12-month follow-ups revealed that some patients maintained and consolidated changes demonstrated at 2 months, others displayed further personal growth that was still in progress, while some identifiable subgroups tended to regress from the level of improvement indicated earlier. Most subjects demonstrated rapid and enduring changes in values and beliefs, in feelings of well-being, and to a lesser extent, in model behavioral patterns. The overall results to date are consistent with Lorr's (1962) conclusion regarding all psychotherapies:

Change would appear to require the passage of time. Insights are put into practice in daily living. New ways of reacting interpersonally must be tested again and again in natural settings before what has been learned becomes consolidated. Trial and error testing seems a prerequisite for the process of growth and change. Especially in adults, there is no reason for expecting striking characterological changes in a matter of weeks. [p. 140].

Until recently, the focus of our work has been on relationships between pretreatment and posttreatment variables. For the most part, assessment procedures selected were designed to measure differential psychopathology and various criteria of clinical improvement. In short, the relatively invariate therapeutic program described earlier has been treated as an integral "package" with decreases in pathology providing an estimate of its effectiveness for given clinical syndromes. Control groups continue to be an exorbitant luxury we cannot afford. Despite economic, ethical, and methodological restrictions on experimental design, it has been possible to expand and refine our assessment procedures to include: (a) pretreatment individual differences in nonpathological attributes (e.g., Jungian personality types, suggestibility, religious attitudes); (b) self- and independent-

ratings of various aspects of response during the psychedelic experience (e.g., perceptual and emotional features, thematic content); and (c) measures of subsequent change along health-growth dimensions as well as decreases in pathology (e.g., self-actualizing tendencies, creativity). In addition to providing more comprehensive data on differential response to one technique of psychedelic therapy, this latest revision is particularly appropriate to the self-selected patient sample available, namely: individuals possessing the YAVIS syndrome (young, attractive, verbal, intelligent, successful): highly motivated specifically for psychedelic therapy; and presenting problems that Schofield (1964) has termed "the philosophical neurosis."

A fairly large body of accumulated data has already been collated and analyzed on various subgroups of the 600 subjects who have completed the program. Many suggestive relationships between the two classes of independent variables described earlier have been demonstrated. These in turn bear a number of significant relationships to outcome variables. For example, our most recent results indicate significant positive relationships between degree of field-independence, the "peakness" of the psychedelic experience, clinical criteria of improvement, and increases in self-actualization. If corroborated by other investigators, such findings would have both theoretical and clinical implications of considerable import. Unfortunately, it is unlikely that similar programs will be initiated in the foreseeable future due to an uncongenial social climate, the increasing difficulty in obtaining federal endorsement, and the unavailability of funds for psychedelic research.

STRATEGIES OF RESEARCH IN PSYCHEDELIC THERAPY

Despite the mass of published studies on the effects of LSD in man and animal,

cross-validated results are generally lacking. With regard to the acute phase of the drug-induced state, there is ample evidence indicating major changes in cerebral and central autonomic functioning, a markedly lowered threshold for arousal, and an increased sensitivity to stimuli in all modalities. These laboratory findings parallel clinical studies which almost invariably report extraordinary perceptual alterations and a blurring of self-nonsel boundaries. Beyond these rather global findings, results have been contradictory even within-species far less complex than man. In addition to the unresolved medico-legal-social issues, systematic study of human reactions to LSD has been plagued by a host of methodological problems associated with greater organic complexity, shortcomings of currently available measuring devices, the ubiquity of individual differences, lack of an adequate theoretical model, and the influence of nondrug variables such as set and setting. It is worth noting that similar problems are encountered in all psychotherapy research.

As with *any* therapeutic agent or technique, it has become apparent that the major psychological or behavioral effects, both during and subsequent to the LSD-induced state, are not drug-specific. The nature, intensity, content, and aftermath of the experience are the resultant of complex transactions between the subject's past history and personality, the expectancies of both subject and administrator, and the physical and psychological setting in which the experience takes place. In short, the administration of LSD is invariably embedded in a larger psychosocial process. Importantly, most of these determinants of response to LSD can be intentionally arranged and/or manipulated so as to foster either a propitious or a stressful experience. In the search for invariant or "drug-specific" reactions, much of the reported research to date has failed to assess, control, or systematically vary, the relevant nondrug

variables. Contradictory results become more understandable when variables associated with the psychosocial context of drug administration are taken into account.

The bulk of published reports in professional journals has been of two kinds: (a) laboratory studies of the physiological and behavioral effects during the period immediately following ingestion of the drug (3-8 hours); and (b) clinical studies of the therapeutic efficacy of LSD either as an adjunct to orthodox therapies or as a primary means for producing rapid personality change. A number of distinctive features have characterized these two major lines of investigation. These may be summarized as shown on page 505.

It should be emphasized that these two research paradigms are mutually exclusive, yield opposite findings, and neatly accommodate approximately 500 studies. Clearly some basic conceptual and methodological fallacies underlie both strategies. From an historical perspective, the legacy of Newtonian science and physicalistic notions of illness and treatment characterize this work. *The major conceptual fallacy, usually implicit, is the assumption that only drug specific effects are real, valid, and lawful. Nonspecific variables that are difficult to define and measure rigorously are random, insignificant, and sources of error.* Methodologically, this assumption and its derivatives results in the use of artificial and often meaningless control groups, arbitrary distinctions between real and placebo reactivity, and inappropriate applications of the double-blind procedure.

Although laboratory and clinical studies are dissimilar in almost all respects, *both* approaches consider the drug's pharmacological properties the *major* determinant of physiological, behavioral, and/or subjective changes. Stated differently, the drug per se is assumed to be the most important independent variable under study. The effects of nondrug variables

Laboratory Studies

1. view the drug as a stressor capable of simulating psychotic-like behavior ("psychotomimetic" orientation).
2. focus on the direct effects of the drug shortly after ingestion.
3. systematically manipulate drug variables such as dose and frequency of administration rather than extra drug variables.
4. pay minimal attention to nondrug variables (e.g., set and setting) and individual differences (e.g., personality).
5. use more objective, quantitative, precise indices of drug effects (e.g., EEG; reaction time).
6. apply operationally defined criteria of behavioral change measured against pre-drug performance levels (e.g., paired-associate learning tasks.)
7. employ nonclinical, "naive", randomly selected subjects.
8. obtain results which indicate various kinds and degree of performance-impairment.

Clinical Studies

- view the drug as a liberator which facilitates accurate perception and insight. ("psychedelic" orientation).
- focus on behavior changes subsequent to rather than during the drug experience.
- manipulate subject characteristics (e.g., diagnosis) and vary drug variables unsystematically.
- pay greater attention to variables associated with the context of drug administration (e.g., preparation of subject; setting).
- use more global, subjective, qualitative indices of drug effects (e.g., therapists' ratings).
- apply clinical criteria of behavioral change (e.g., decrease in psychic pain; increase in marital harmony).
- use selected clinical samples of subjects or sophisticated volunteers.
- obtain results which indicate various kinds and degree of performance-enhancement.

have generally been ignored, minimized, or estimated post hoc. The few studies employing a control group have either randomized or attempted to equalize nondrug variables. Laboratory studies attempt to eliminate their effects in both groups (double-blind design), while clinical studies match groups at minimal and/or "optimal" levels of various nondrug variables. Controlled or uncontrolled, laboratory or clinical, LSD studies have almost invariably interpreted psychosocial variables as *confounding* or *biasing* the results.

The sole purpose of the control group has been to assess the effects of the one "valid" class of independent variables (drug factors) and control the effects

of "extraneous" variables (collectively termed "the placebo effect"). It is most ironic that in clinical terms, these "extraneous" classes of variables are precisely those considered the major determinants of response to psychotherapy, namely: patient variables; therapist-patient interaction variables. With reference to psychotherapy, the nonspecific-extraneous-placebo fallacy has been well-stated by Shapiro (1964): "The placebo is defined as the psychological elements in treatment; psychological elements constitute psychotherapy; therefore, psychotherapy is a placebo."

"The no-treatment" control group. The limited value of the double-blind design for evaluating psychotropic drugs

has become increasingly apparent in recent years (Tuteur, 1958). For similar reasons the usefulness of inert and active placebos has also been seriously questioned (Ditman, 1963). Central to the documented shortcomings of these control devices is the major conceptual fallacy stated above, namely, the untenable assumptions concerning specific and non-specific variables. Recent findings indicate that it is impossible to isolate a "pure" drug effect (Lyerly, Ross, Krugman, & Clyde, 1964); that no substance is entirely "inactive" (Shapiro, 1964); and that double-blind studies are seldom double-blind (Barsa, 1963). In addition to its methodological flaws, Rickels (1963) concludes that the double-blind design is clinically impractical, medically unsound, and too rigid for psychiatric research. He further notes, "while uncontrolled studies are easily influenced by the optimistic and enthusiastic bias of the investigator, it should be realized that controlled clinical trials may be just as easily influenced by the negative, pessimistic attitude of the investigator."

These observations parallel recent developments in psychotherapy research. For example, Strupp (1960) considers the therapist's personality inextricably interwoven with his technique and questions the possibility of separating them experimentally. Similarly, Goldstein's (1962) careful critique of control studies disclosed a basic fallacy in the "therapy" versus "no-therapy" design, since "non-specific therapy" was always operative in the control group.

It is apparent that attempts to assess the effects of a drug or a method of psychotherapy in a psychosocial vacuum are futile. In the same sense that the causes and treatment of emotional disorders are nonspecific, the potential therapeutic effects of LSD are also nonspecific. Like all psychotherapies and most medical treatments, there is nothing intrinsically therapeutic about LSD that cannot be

negated (or enhanced) by so-called non-specific variables.

Having stressed the faulty reasoning underlying most control group research, it is worth emphasizing that drug factors (or technique factors) are one class of relevant independent variables. The dubious assumptions being questioned are really twofold: (a) that drug factors are the *only* and/or *most-important* independent variable; and (b) that drug effects can be (or ideally should be) isolated and assessed independent of nondrug variables. Stated differently, an exclusive manipulation of drug factors using the classical, single independent variable design is inappropriate and unproductive. This "ideal" paradigm of research in psychedelic therapy fails to take into account the transactional aspects of any treatment process. Furthermore, it assumes an archaic concept of placebo effects that is no longer tenable.

Real versus placebo effects. Current reevaluations of the placebo concept have been strongly influenced by the advent of psychotropic drug therapies. Another equally important factor has been the acceptance of psychotherapy as a legitimate form of treatment. As evidenced by the work of Frank (1961, 1962), Goldstein (1962), Kiev (1965), Krasner (1962), and Shapiro (1964), the main features of the "placebo" effect are essential ingredients of effective psychotherapy (e.g., positive therapist-patient expectancies). Consistent with these developments, revisions of the placebo concept have taken two directions. One would redefine the active-inactive or specific-nonspecific distinction. According to this view, the "nonspecific" rubric should be restricted to unidentified variables that effect the dependent variable but are not clearly delineated as yet, and therefore, cannot be measured, controlled, and/or manipulated.

The other trend in current thinking would retain the traditional specific-nonspecific distinction but readily ac-

cepts placebo effects as real and valid. Many writers have observed that the benefits of placebos are and always have been very real. "It is not such benefits which are new to medicine, only recognition that such benefits actually exist [Goldstein, 1962]." Complete acceptance of placebos as *legitimate* aspects of medical and psychological treatment, however, is far from complete. Contrary views presently in vogue are amply documented by Shapiro (1964) and strongly evident in psychedelic research. The problem is further complicated by the tendency to define the placebo so that one's own therapy is excluded. For example, "psychotherapists and psychoanalysts often consider drug and convulsive treatment to be placebo treatments, but frequently deny the possibility that psychological treatment might be in the same category. Surgeons might include the aforementioned treatments in the definition but exclude surgery [Shapiro, 1964]."

Similar biases in defining placebo effects differentiate laboratory and clinical studies of LSD. The striking polarities in psychedelic research reflect and underscore the real-placebo dilemma. The major issues involved are especially well focused in this work because the therapeutic use of LSD bridges the gap between medical treatment and psychotherapy. Consistent with the holistic approach to illness and treatment, psychedelic therapy highlights the arbitrary but well-entrenched distinctions between specific and nonspecific factors, true and error variance, drug therapy, and psychotherapy.

One-dimensional therapy. Developments in research design and methodology have failed to keep pace with the holistic nature of most treatments. Rather than designing a paradigm to fit the treatment, the treatment is often bent to fit an outmoded paradigm. "Goodness of fit" between experimental design and psychedelic therapy has been particularly poor—due in part to its ambiguous status as a

psychopharmacological treatment. Unfortunately, the variable in-a-vacuum ideal of drug research has taken precedence over the multidimensional design preferred in psychotherapy research.

Exclusive manipulation of *the* single "valid" independent variable distorts and oversimplifies the therapeutic process. It also restricts hypothesis testing to variations of the rhetorical outcome question, "does *it* work?" A further weakness is the unacknowledged cluster of experimental biases which usually accompany this strategy. As detailed earlier, these biases result in an artificial straining at a neutral or even negative attitude. The presumed objectivity achieved is more apparent than real since the direction of bias is merely reserved, not eliminated. The double-blind study obscures rather than controls vision. Its obtrusive demands disrupt meaningful regularities (e.g., in therapist-patient expectancies), creating instead a synthetic Hawthorne effect. Rosenthal and his coworkers (1963) have amply demonstrated the ubiquitous influence of experimenter bias even in animal studies. Regarding therapy research, it seems apparent that the null hypothesis is often desirable as a design characteristic, improbable as an experimenter attitude, and merely absurd as a therapist expectation.

The independent variable complex. Rather than disrupting the treatment process in order to isolate one special status variable, a more fruitful approach to psychedelic therapy would be to acknowledge at the onset that the *known* factors effecting patient change are multidimensional, intimately related, and have comparable status ("specific," "real," "valid"). Research in psychedelic therapy requires a conceptual model that permits systematic study of different types of patients exposed to different kinds and levels of the relevant drug *and* nondrug conditions. At the methodological level, experimental design and/or statistical procedures must allow for covariance and

interaction as well as manipulation and control. In other words, the use of factorial designs is strongly indicated. Only factorial designs meet the necessary requirements for relating outcome to the complex patterning of independent variables. Unlike the single variable model, hypothesis testing becomes more comprehensive and meaningful. Instead of "does it work," the factorial design makes it possible to ask, "when it works, why does it?" "When it doesn't, why not?" In these terms, the many faces of "It" (drug-nondrug variable patterning) will eventually serve as a basis for prognosis and/or optimizing the treatment process.

The multidimensional model assumes that LSD treatment is a distinctive form of psychotherapy. As such, changes in outcome variables are a function of relevant pretreatment and process variables. Consistent with the empirical evidence available, there is general agreement on the major classes of variables that are instrumental in effecting patient change. Psychedelic therapy merely adds another dimension to the list, namely, drug factors. Adapted in part from Krasner (1962) and Kiesler (1966), the fairly inclusive complex of interrelated variables listed below places drug factors in their proper perspective:

Therapist variables (experience, personality, technique, enthusiasm or confidence, role expectancies, etc.)

Patient variables (stable and temporary attributes; demographic, intellectual, motivational, semantic, perceptual; values, role expectancies, etc.)

Therapist-patient interaction variables (reciprocal verbal and nonverbal activity; similarities and differences in personality, motivation, therapy expectancies, etc.)

Situational variables (environmental and interpersonal conditions including "the 'atmosphere' in which therapy takes place; the 'set' which is created for the patient; antecedent contacts between therapist and patient; sensory input per-

mitted the patient; and 'ambiguity'." [Krasner, p. 73]

Drug variables (agent, dose, frequency)

The dependent variables in psychedelic research are the immediate, short- and/or long-term effects of a specifiable pattern of independent variables. The focus of a particular study may be on various dimensions of response change measured during the acute phase of the drug experience (e.g., intensity, emotional valence, thematic content) and/or at various points in time following psychedelic therapy (measures of treatment outcome). It should be noted that response during the psychedelic state may act as either an independent or dependent variable.

The psychedelic state. As indicated earlier, a large body of evidence indicates that invariant features of the LSD-induced state are generally lacking. The only consistent finding has been an increased sensitivity to both internal and external stimuli—or stated differently, a markedly lowered threshold for arousal. Placed within a multidimensional framework, this distinctive though not unique characteristic offers a guideline for future research programs. Specifically, the following basic hypothesis is suggested: *A suprathreshold dose of a psychedelic drug renders an individual extremely susceptible to internal and/or external sources of influence.* The drug per se does not determine the agent(s) of influence nor does it favor the direction of influence. The impact of a potential behavior-altering agent may be weak or strong, pleasant or unpleasant, temporary or enduring. Specific experiential and behavioral change sequences are a function of contextual variables; intrapersonal, interpersonal, and situational. Although unusually powerful as a means of enhancing susceptibility to influence, the drug does not insure that such influence will take place.

Internal agents of influence are operationally represented by stable and tem-

porary attributes of the patient. External agents of influence include the therapist and setting. Differential susceptibility to various influence sources is a function of their compatibility with the existing state and their intensity. Regarding drug variables, both the agent and dosage effect the relative intensity of various internally and externally based cues. For example, Zubin and Katz (1964) report an inverse relationship between dosage level and the influence of personality. Similarly, Mescaline and LSD differentially increase susceptibility to external and internal sources of influence, respectively. Relatively greater susceptibility to external and internal influences, respectively, is also related to extraversion-introversion (Kornetsky & Humphries, 1957), field-dependence-independence (Linton & Langs, 1962), and hysterical-compulsive defenses (Mogar & Savage, 1964).

Other than drug variables and single personality dimensions, little attempt has been made to relate the known independent variables, singly or in combination, to potential sources of influence. This is particularly distressing since almost all of the relevant variables are directly manipulable by the experimenter (not the therapist). Although not directly manipulable, stable patient and therapist dispositions can be systematically varied by means of preestablished subgroups. *It is significant that no studies have been conducted using the drug regime as a control variable in matched groups exposed to different levels of one or more nondrug variables.* By holding drug factors constant and systematically varying patients, therapists, patient-therapist matchings, and setting, it would be possible to discover which variable-configurations interact positively with the condition of "susceptibility enhancement."

The placebo effect revisited. The cardinal feature of the drug-induced state suggests that patient expectancies constitute a major agent of potential influence in psychedelic therapy. More generally,

Krasner (1962) considers the "placebo" effect (the emotional state of trust, "faith," positive expectancy) the common element in *all* influencing processes, including psychotherapy. Krasner's analysis represents an extension of the trends described earlier toward "legitimizing" the placebo effect and specifying its parameters. Consistent with this view, placebo reactivity does not indicate feigned illness (Whitehorn, 1958) and correlates positively with both favorable prognosis and favorable outcome (Goldstein, 1962). Of particular relevance to psychedelic therapy is the failure to identify consistent placebo responders, that is, the placebo effect tends to be situation- or treatment-specific (see e.g., Linton & Langs, 1962). Shapiro (1964) notes that "a drug may be a good placebo stimulus for some patients; psychotherapy may be a good placebo stimulus for other patients." Interestingly, the personality correlates of relative susceptibility to external and internal influences in the psychedelic state are highly similar to those characterizing drug-susceptible patients (extravertive, field-dependent, hysteric) and psychotherapy-susceptible patients (introvertive, field-independent, compulsive). Furthermore, Mogar and Savage (1964) found that hysterical patients tended to have unrealistic expectancies and showed marked regression at 6-month follow-ups. In contrast, compulsive patients displayed moderate expectancies and showed continuing improvement at 6 months. These results are consistent with Goldstein (1962) whose extensive review of the evidence revealed an inverted U shaped function between patient expectancies and improvement.

Therapist-patient congruence. The growing body of evidence indicating the placebo effect is instrumental in effecting patient change tends to confirm Frank's (1962) observation that:

there is no independent, objective criterion for the truth of any interpretation in psychotherapy The therapeutic effect of an inter-

pretation depends not on its truth, but on whether both therapist and patient believe it to be true [pp. 9-10].

At the close of the Second Research In Psychotherapy Conference, Strupp (1962) referred to therapist-patient match as one of the "growing edges" of current research. In psychedelic therapy, the greatly heightened susceptibility of the patient to both internal and external sources of influence underscores the importance of therapist-patient compatibility. Although the relevant dimensions of therapist-patient congruence have yet to be specified in psychedelic research, it seems safe to assume that some consensus is necessary "between the kind of help the patient is seeking and the kind of help the therapist is able to provide [Wallach & Strupp, 1960]." This implies an explicit or implicit shared belief that the treatment will be effective. Needless to say, the ability to identify and predict the patient's differential sensitivity to types of influence would greatly simplify the problem of therapist-patient match.

Although major changes in the patient's value belief system are a common result in psychedelic therapy (Mogar, 1964; Unger, 1964), the extent to which this represents a "convergence" (Pepinsky & Karst, 1964) between patient and therapist is presently unknown. In terms of the basic hypothesis suggested earlier, the degree of convergence is primarily a function of the patient's relative susceptibility to internal (latent beliefs) and external (therapist beliefs) sources of influence.

Clearly there is nothing magical about psychedelic drugs. Their effectiveness can only be gauged by specifying outcomes and exploring various configurations of known parameters. Since it has become apparent that one man's treatment (healer or patient) is another man's placebo (healer or patient), all forms of therapy should seek to maximize con-

gruence between patient-complaint and healer-treatment.

REFERENCES

- Barsa, J. A. The fallacy of the "double-blind". *American Journal of Psychiatry*, 1963, 119, 174-175.
- Betz, B. J. Experiences in research in psychotherapy with schizophrenic patients. In H. H. Strupp & L. Luborsky (Eds.), *Research in psychotherapy*. Vol. 2. Washington, D.C.: American Psychological Association, 1962. Pp. 41-60.
- Ditman, K. S. Psychotomimetics: Pharmacodynamic and psychotherapeutic properties. *Proceeding West Pharmacological Society*, 1963, 6, 13-27.
- Frank, J. D. Persuasion and healing. Baltimore, Md.: Johns Hopkins Press, 1961.
- Frank, J. D. Introduction. In H. H. Strupp & L. Luborsky (Eds.), *Research in psychotherapy*, Vol. 2. Washington, D.C.: American Psychological Association, 1962. Pp. 1-12.
- Goldstein, A. P. *Therapist-patient expectancies in psychotherapy*. New York: Macmillan, 1962.
- Kiesler, D. J. Some myths of psychotherapy research and the search for a paradigm. *Psychological Bulletin*, 1966, 65, 110-136.
- Kiev, A. The study of folk psychiatry. *International Journal of Psychiatry*, 1965, 1, 524-550.
- Kornetsky, C., & Humphries, O. Relationship between effects of a number of centrally acting drugs and personality. *Archives of Neurology and Psychiatry*, 1957, 77, 325-327.
- Krasner, L. The therapist as a social reinforcement machine. In H. H. Strupp & L. Luborsky (Eds.), *Research in psychotherapy*. Vol. 2. Washington, D.C.: American Psychological Association, 1962. Pp. 61-94.
- Linton, H., & Langa, R. Placebo reactions in a study of LSD-25. *Archives of General Psychiatry*, 1962, 6, 369-383.
- Lorr, M. Relation of treatment frequency and duration to psychotherapeutic outcome. In H. H. Strupp & L. Luborsky (Eds.), *Research in psychotherapy*. Vol. 2, Washington, D.C.: American Psychological Association, 1962. Pp. 134-141.

- Lyerly, S. F., Ross, S., Krugman, A. D., & Clyde, D. Drugs and placebos. *Journal of Abnormal and Social Psychology*, 1964, 68, 321-327.
- Meduna, L. J. *Carbon dioxide therapy*. Springfield, Ill.: Charles C Thomas, 1950.
- Mogar, R. E. Current status and future trends in psychedelic research. *Journal of Humanistic Psychology*, 1966, 5, 147-166.
- Mogar, R. E., & Savage, C. Personality change associated with psychedelic therapy. *Psychotherapy*, 1964, 1, 154-163.
- Pepinsky, H. B., & Karst, T. O. Convergence: A phenomenon in counseling and psychotherapy. *American Psychologist*, 1964, 19, 333-338.
- Rickels, K. Psychopharmacological agents: A clinical psychiatrist's individualistic point of view. *Journal of Nervous and Mental Diseases*, 1963, 136, 540-549.
- Rosenthal, R. On the social psychology of the psychological experiment. *American Scientist*, 1963, 51, 268-283.
- Savage, C., Fadiman, J., & Mogar, R. E. The effects of psychedelic therapy on values, personality, and behavior. *International Journal of Neuropsychiatry*, 1966, 2, 241-254.
- Schofield, W. *Psychotherapy: The purchase of friendship*. Englewood Cliffs, N.J.: Prentice-Hall, 1964.
- Shapiro, A. K. A historia and heuristic definition of the placebo. *Psychiatry*, 1964, 27, 52-58.
- Strupp, H. H. Nature of psychotherapist's contribution to treatment process. *Archives of General Psychiatry*, 1960, 3, 219-231.
- Strupp, H. H. Psychotherapy. *Annual Review of Psychology*, 1962, 13, 445-478.
- Tuteur, W. The double-blind method: Its pitfalls and fallacies. *American Journal of Psychiatry*, 1958, 114, 921-922.
- Unger, S. M. Mescaline, LSD, psilocybin, and personality change. In D. Solomon (Ed.), *LSD: The consciousness-expanding drug*. New York: Putnam, 1964. Pp. 111-125.
- Wallach, M. S., & Strupp, H. H. Psychotherapists' clinical judgements and attitudes toward patients. *Journal of Consulting Psychology*, 1960, 24, 316-323.
- Whitehorn, J. C. Psychiatric implications of the placebo effect. *American Journal of Psychiatry*, 1958, 114, 662-664.
- Zubin, J., & Katz, M. M. Psychopharmacology and personality. In P. Worschel & D. Byrne (Eds.), *Personality change*. New York: Wiley, 1964. Pp. 127-142.