The Study of Multiple Personality Disorder: General Strategies and Practical Considerations

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INTRODUCTION

The history of multiple personality disorder (MPD) spans the development of modern psychiatry. It is one of the oldest clinical psychiatric syndromes. Scientific research into MPD, however, is in its infancy, with the first controlled studies appearing only in the last few years. In general, the scientific study of a pathologic condition begins with a descriptive phase, proceeds through a correlative phase, and moves into the active experimental investigation of the mechanisms involved in the pathologic process. Over 100 years of MPD case reports have firmly established the clinical description of this disorder. We are now moving into the second and third stages of inquiry. The scientific questions to be asked of this unusual disorder and the methods with which to address these questions are just now beginning to be formulated. This article addresses general issues and some practical considerations that arise in studying this unique condition.

THE QUESTIONS

Most investigators of multiple personality disorder have asked the implicit question: "Is it real?" This is a large and complex question which is not likely to yield a satisfactory answer without arduous efforts. Currently, there are no pathognomonic findings for any psychiatric diagnostic category; the acceptance of specific clinical syndromes is based on professional consensus. This same validation process should be applied to MPD. Attempts to prove or disprove the existence of MPD are fraught with difficulty and are not likely to be a fruitful avenue of investigation into the nature of this phenomenon. Instead, a series of simpler, more focused questions may provide the cumulative evidence necessary to support a judgment one way or the other.

The alternate personalities are the most dramatic feature of this disorder; they provide the principal variable which can be manipulated experimentally. It is the observed differences across these alternate personalities within an individual that clinicians find so striking. The nature and extent of these differences is open to study. Psychological differences across alternates can be assessed with a variety of standardized tests. A number of state-dependent learning and memory paradigms can be tested against the reported differences in memory across alternates. Physiological differences among alternate personalities have prompted both interest and skepticism. These, too, can be measured and analyzed.

To those familiar with these patients, some interesting phenomenological questions present themselves. The numbers and types of alternate personalities are receiving attention from some investigators. The high incidence of reported psychosomatic phenomena, such as headache and functional bowel disease, deserves evaluation. The overlap of MPD with other psychiatric disorders such as schizophrenia, borderline personality disorder, phobic-anxiety syndromes, and the hysterical disorders deserves clarification. Several different classification schemes for sub-types of this disorder have been suggested and can be investigated.

A high incidence of physical and sexual abuse has been reported in the childhood histories of these patients.
Such reports suggest that multiple personality disorder may serve as an important model with which to understand the impact of traumatic environmental events on psychological development.

Several different treatment modalities have been applied to this disorder with variable success. Systematic studies of different treatment techniques will be necessary to compare these methods and determine the treatments of choice. If the therapeutic outcomes of "integrations" or "fusions" (the coalescence of alternate personalities into a single personality) are as reported, then multiple personality disorder may provide a fascinating model with which to examine the mechanisms of psychophysiological change produced by treatment.

MODELS

Several hypothesis-generating models have been suggested for multiple personality disorder. These theoretical models can provide the investigator with a frame of reference within which specific research questions can be asked. They may also suggest appropriate control groups for comparison studies. Additionally, in some cases, these models link MPD to other psychophysiological phenomena which have been extensively investigated.

MULTIPLE PERSONALITY AS A TRANCE-STATE DISORDER

The linkage between MPD and hypnosis was first commented on by Janet in 1889 and was elaborated by Morton Prince in 1890. Prince speculated that if a patient were "... hypnotized sufficiently often and under sufficiently varied circumstances, the conscious experiences of her second self... would become extensive." Subsequent investigators have used hypnotic techniques for the experimental creation of "multiple personality-like" phenomena in normals, although these studies have been criticized by at least one clinician familiar with MPD. Bliss has suggested that MPD is caused by "... the patient's unrecognized abuse of self-hypnosis."

Conceptualization of MPD as a trance-state disorder provides a predictive model for the generation of research approaches to the phenomena of MPD. Hypnotized normal control subjects may be useful as a control group in studies investigating psychophysiological alterations associated with switches in personalities. Additionally, aspects of experimental design utilized in studies of hypnosis, e.g., the use of simulating control subjects, pioneered by Orne, may be incorporated into MPD studies.

NEUROLOGIC MODELS OF MPD

In 1892, Charcot suggested that there was a link between multiple personality and epilepsy. Since that time, clinicians have continued to report the co-existence of MPD and epilepsy. Two recent reports describe the coinidence of MPD and temporal lobe epilepsy in a group of patients followed at the Beth Israel Hospital in Boston. Mesulam speculates, based on his data, that non-dominant temporal lobe dysfunction may be more likely than dominant temporal lobe disease to produce autonomous dissociative states.

PSYCHOLOGICAL MODELS

Multiple personality disorder has been interpreted from the perspective of a number of different psychological models. Marmer has considered this disorder in terms of a psychoanalytic model. Watkins and Watkins have offered a model of MPD in terms of ego-state theory. Confer and Ables viewed the phenomenology of MPD from an object-relations standpoint. These psychological interpretations may be useful in framing questions concerning the interaction of developmental experiences and psychopathology.

MODELS OF LEARNING AND MEMORY

State-dependent learning paradigms provide a useful construct for the evaluation of the amnesias and compartmentalizations of memory which are hallmarks of MPD. Great care, however, must be used in the design of such studies. A large number of conceptual and methodologic pitfalls await an unwary investigator.

SPLIT-BRAIN MODELS

Clinicians treating these patients frequently report observing changes in handedness across alternates of the same individual. Current experimental paradigms for investigating shifts in hemispheric dominance may prove relevant to the study of such changes across alternate personalities.

PRACTICAL CONSIDERATIONS

Individuals with multiple personalities can be very difficult to work with. The most common comment spontaneously offered in a questionnaire survey of clinicians treating patients with MPD was a remark to the effect that this was the most difficult patient they had ever treated. Frequently, this was qualified with "... and the most rewarding." Certainly, not all MPD patients are capable of participating in a rigorous experimental study. The ability of a MPD subject to take part in research will depend on the degree to which that subject's system of personalities can tolerate the stress of the experiment and can comprehend and agree to cooperate with the required tasks.
SUBJECT SELECTION

In general, the research group at the National Institute of Mental Health found that MPD patients who are well along in the course of their treatment are much better research subjects than those who are newly diagnosed. This means, of course, that the results of these studies are in part biased by the selection process. Before beginning any studies with a MPD subject, we spend some time getting to know the alter personalities. In most cases, this requires the guidance of the patient’s primary therapist. This getting-acquainted process allows the personalities to get some feeling for us and to establish a measure of trust, which is a key issue in dealing with these people. We, in turn, learn something about the alternate personalities before deciding which of them to include in a specific study. We confer with the subject and therapist on the final selection of personalities for the experiment.

INFORMED CONSENT

The next step is a careful description of the study to those alternate personalities who will participate and to any other personalities who are interested. Many MPD patients have “guardian” personalities, who function to protect the multiple from perceived dangers. It is important to inform all such personalities about the experiment. We take the subject to the experimental set-up and allow each personality who is participating in the study to “come-out” and become familiar with the room and equipment. Additionally, other interested alternates are invited to look around. At this point, a single informed consent is obtained from the patient as a whole. This procedure has been discussed with the Bioethics Group at the National Institute of Health; it is felt to comply with the spirit and letter of the requirements for informed consent.

UNCONTROLLED SWITCHING

The seemingly simple experimental paradigm of giving each alternate personality the same task and comparing their performance becomes very complex in practice. The principal variable of such a design, the switching of alternate personalities, is, unfortunately, not entirely under the control of either the experimenter or the MPD subject. In many cases, a request that a certain alternate personality “come out” to participate in the experiment is sufficient. In some situations, however, the requested alternate personality does not appear, or, if it does, it may not be able to remain out for the duration of the experiment. Uncontrolled switching is one of the major psychopathologic manifestations of this disorder. Not too surprisingly, it manifests itself in the research setting. An allied methodologic issue is the identification of alternate personalities. How do you know that you really have the alternate personality that you think you have? This becomes an important issue in studies that use repeated measures on an alternate. Our present solution for dealing with these two related issues is to have an individual familiar with the patient (usually the primary therapist) identify each personality and observe the experiment continuously for evidence of uncontrolled switching. Also, we ask each person-ality if he or she “lost any time” during the procedure. Trials with evidence of uncontrolled switches are excluded from analysis.

PERFORMANCE ISSUES

In designing an experimental task with which to measure intrinsic differences across alternate personalities, one must be sensitive to the wide variations in performance of alternate personalities in their general activities. The alternate personalities of an individual with MPD behave as if they differ considerably along several dimensions. They seem to vary in their ability to comprehend instructions; some alternates are capable of good abstraction while others are profoundly concrete in their thought processes. Differences in handedness or motor coordination may affect performance in motor tasks. Levels of alertness and attention spans will vary. Some alternates are easily frightened and their elevated level of anxiety may degrade their performance. Personality-specific psychosomatic phenomena such as color blindness or sensory anesthesias may also confound the results. There are many idiosyncratic phenomena associated with each MPD subject’s system which can affect the data in unpredictable ways.

MEMORY ISSUES

In designing experiments which involve learning or practice effects, one must be aware of the directional memory issues associated with MPD. The alternate personalities of an MPD subject vary in their awareness of the memories and experiences of the other alternate personalities. This directional awareness is seen in the vast majority of clinical cases and has served as the basis for several proposed classification schemes. If properly utilized, this phenomenon may prove to be a useful probe into the mechanisms of memory storage and retrieval. However, if it is overlooked, it can confound the data significantly.

EFFECTS ON MPD SUBJECTS

We have remained in touch with most of the MPD subjects who participated in our studies. It appears that the long-term effects of the research have been minimal; those noted have been generally beneficial. Some subjects, however, did have difficulties during the research procedures. The most common complaint was that the controlled switches enforced by experimental design produced headaches. The experimental milieu and procedures such as being “wired-up” (for electroencephalograph or galvanic skin response studies) have frightened or angered some alternates; on rare occasions, this resulted in the premature termination of a trial. In these cases, we work with the primary therapist and MPD subject to alleviate the discomfort. Subjects are usually able to provide specific suggestions which are helpful. It is important to allow MPD subjects a measure of control in such situations.

STUDY DESIGN STRATEGIES

Two very broad categories of study design can be applied to the questions of interest in MPD: the experimental study
with the active manipulation of variables by the investigator and the associational study, in which data are usually collected by survey.

**EXPERIMENTAL STUDIES**

Experimental studies are useful in studying the nature of the psychological and physiological differences reported to exist among alternate personalities. In one such study, differences in evoked potentials among alternate personalities of subjects with MPD were compared with those of control subjects simulating alternate personalities. Three or four alternate personalities within each MPD subject were tested five separate times in a randomized order. Age and gender-matched simulating control subjects were handled in the same fashion. The degree of similarity between pairs of alternate personalities for the group of MPD subjects and the group of simulating controls was determined by calculating the intraclass correlation coefficients. The statistical significance of the differences in degree of similarity between the two groups was determined by the method of Fisher. The above design essentially asks: "How much do the alternate personalities of a multiple look like each other on a given measure and is this significantly different from the degree of similarity in the control subject's simulated alternate?" It should be noted that in order to collect sufficient data on 11 MPD subjects and ten matched controls nearly 400 evoked potential trials were required. An "N" of 10 MPD subjects can be equivalent to studying 40 other patients.

**ASSOCIATIONAL STUDIES**

Some important questions, eg., "Is child abuse involved in the etiology of multiple personality disorder?" do not lend themselves to experimental manipulation. These questions must be answered by associational studies. There are two major methods for associational studies: the case-control study and the cohort study. These are sometimes called respectively retrospective and prospective studies, although retrospective data can be used in some types of cohort studies.

Case-control studies are useful in the investigation of allegedly rare conditions such as MPD, which would be infrequently represented in a random population sample. In such a study, a group of individuals with the identified condition is compared with a control group of unaffected subjects. The data are usually obtained by survey and are generally retrospective. The principal design issue in case-control studies is the method by which the control population is chosen. Case-control studies have difficulty in establishing cause-effect relationships, and a question such as the relationship of child abuse to the development of MPD may require a further subject selection factoring as has been used in the adoption studies of the genetics of schizophrenia.

In cohort studies, a population is chosen on some general basis (eg, occupation or geography) and observed prospectively over time to determine the rates at which various disorders occur. Obviously, such studies require longer periods of time and are more complex. Their advantage is that a number of factors can be studied simultaneously.

**SINGLE CASE STUDIES**

Single case studies have a special place in the investigation of MPD. The vast majority of clinical reports on MPD are single case studies. The supposed rareness of the disorder and the uniqueness of the phenomena seen in these patients increases the value of these reports. Experimental studies with single cases are difficult and require a creative design and extensive documentation to overcome the statistical limitations of a one subject study.

**SUMMARY**

The scientific study of multiple personality disorder is just beginning. This condition provides many interesting scientific questions and some unique difficulties for investigators. Study designs need to take into account the nature of the disorder to avoid methodologic pitfalls.

**REFERENCES**