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## The A-B variable and nursing staff-patient relationships.

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THE A-B VARIABLE AND NURSING STAFF-PATIENT RELATIONSHIPS

A Dissertation Presented

By

SUSAN E. GOTTLIEB

Submitted to the Graduate School of the  
University of Massachusetts in partial fulfillment  
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

September 1977

Psychology Department

c Susan E. Gottlieb 1977

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## THE A-B VARIABLE AND NURSING STAFF-PATIENT RELATIONSHIPS

A Dissertation Presented

By

SUSAN E. GOTTLIEB

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## ABSTRACT

## The A-B Variable and Nursing Staff-Patient Relationships

(September 1977)

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The present study investigated the effects of nursing staff members' A-B status on their relationships with patients in a state hospital. This study was the first clinical investigation of the A-B variable's relevance to a helping relationship beyond the therapist-patient relationship.

The concept of an A-B variable originated in Whitehorn and Betz's research on the determinants of effective therapy with schizophrenics. Labelling therapists who had high improvement rates with schizophrenics as As and those who had low improvement rates as Bs, they sought to uncover the correlates of this differential skill. A and B therapists were found to differ in the quality of the relationships they offered to schizophrenic patients and in their interest patterns on the Strong Vocational Interest Blank (SVIB). Based on A and B therapists' SVIB response differences, predictive scales of therapist effectiveness were developed (known as A-B scales).

Subsequent research on the predictive ability of A-B scales in a variety of patient populations has suggested that therapist A-B status may be related to differential compatibility with neurotics as well as

schizophrenics and that patient characteristics other than diagnosis (i.e., prognosis, social class, and sex) may also affect A and B therapists' compatibility with patients.

The similarity of the personality correlates of A-B status across samples of therapists and nontherapists and the differential compatibility of A and B psychiatric attendants and A and B policemen with various types of helpees in analogue research seemed to indicate the potential relevance of the A-B variable to helping relationships beyond the therapist-patient relationship. The present research attempted to extend the investigation of the A-B variable's relevance to other helping relationships by examining the effects of nursing staff members' A-B status on their interactions with patients in the context of their actual work roles.

Patients' perceptions of their relationships with nursing staff members were used to assess the A-B variable's relevance to these relationships. Patients were asked to rate members of their ward's nursing staff on six relationship dimensions: ease in talking to staff about personal thoughts, feelings, and problems; promptness in responding to the patient's requests; interest in the patient; degree of enforcement of ward rules and regulations; talkativeness; and pleasantness. The effect of patients' diagnosis (schizophrenic versus nonschizophrenic), chronicity, sex, achieved social class, and social class of origin on their ratings of A-B nursing staff in relation to the six relationship dimensions was assessed. The effect of A and B staff members' sex on patients' ratings was also assessed since the validity of the A-B scale for females has not been established.

In general, the results provided little support for the relevance of the A-B variable to nursing staff's relationships to patients in the state hospital studied. Of the five patient characteristics considered in this research, the results provide the most support for diagnosis as a basis of differential compatibility with A and B nursing staff. Schizophrenics and nonschizophrenics tended to differ in their perceptions of the ease of talking to and promptness of A versus B staff and the talkativeness of male A versus male B staff. Patients' sex tended to affect their ratings of the ease of talking to A versus B staff while patients' chronicity, achieved social class, and social class of origin did not affect their ratings of A versus B staff on any of the six relationship dimensions considered. The limited effects of nursing staff members' A-B status on their relationships with patients was discussed in relation to the custodial nature of the nursing role at the state hospital studied.

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# CHAPTER I

## THE A-B VARIABLE AND PSYCHOTHERAPY

### Outcome Research

The concept of an A-B variable evolved from Whitehorn and Betz's research on the determinants of effective psychotherapy with schizophrenics (reviewed by Betz, 1962, 1967). Their research was conducted primarily at the Phipps Clinic of Johns Hopkins University; the Phipps Clinic is a psychoanalytically-oriented inpatient facility. They began their research with the aim to find out what makes a difference in the treatment of schizophrenic patients. From their own work in individual therapy with schizophrenic patients, they had developed the ideas that the important factors lay in the therapists' personal qualities and their styles of clinical transaction with such patients. They had also noted that there seemed to be marked differences between psychiatric residents in regard to their effectiveness with schizophrenics. As part of their research, they attempted to uncover the personality correlates of this differential skill. The criteria of patient improvement used in this research was whether the patient had been categorized as improved or unimproved at the time of discharge. At the Phipps Clinic, the appraisal of the patient's condition at discharge was made not only by the psychiatric resident who treated the patient, but also by the chief resident and by the psychiatrist-in-chief. Thus, any personal bias of the therapist was presumably subject to correction by the clinical judgment of more objective observers.

Whitehorn and Betz (1954), however, sought further confirmation of the validity of the discharge appraisal of improved and unimproved. This discharge appraisal of patients was compared to categorizations based on improvement criteria independent of the therapist's subjective impressions. These improvement criteria were: (a) the disposition of the patient at the time of discharge--whether discharge to the community or transferred to another hospital; (b) increased participation in social relationships with other patients, as recorded in the daily notes kept by the nurses; (c) increased participation in the clinic activity programs, as recorded in nursing and occupational therapy reports; and (d) changes in Behavior Chart ratings. The Behavior Chart is a graphic chart on which the nurses' daily observations of the patients were recorded, supplemented by descriptive notes. The items of the chart are organized in four categories according to whether they characterized normal, overactive, underactive, or "odd" behavior (hallucinations, delusions, mannerisms, etc.). The clinical appraisal of patients as improved or unimproved was related in the expected direction to each of the first three "independent" improvement criteria listed above at the .001 significance level and was also significantly related to all of the Behavior Chart categories except for overactive behavior. These results seemed to offer strong support for the validity of the clinical discharge appraisals of patient status.

In selecting therapists for their research, Whitehorn and Betz (Betz, 1962) attempted to choose therapists with a comparable amount and range of clinical experience. Therapists were required to have treated a minimum of four schizophrenic, four neurotic, and four de-

pressed patients. To investigate the personality correlates of differential effectiveness with schizophrenics, Whitehorn and Betz dichotomized their therapist samples. Therapists achieving 68% or better improvement rates with their schizophrenic patients were designated as As whereas those attaining success rates of 67% or lower were designated as Bs; 68% was the average improvement rate for these therapist samples. The possibility that the patients of A therapists were clinically "easier" cases than those of B therapists was evaluated by comparing the two groups of patients on a wide range of demographic and clinical characteristics. No significant differences were found between the two groups. A and B therapists' general therapeutic aptitude was assessed by comparing their improvement rates with depressed and neurotic patients. There were no significant differences between A and B therapists in their improvement rates with depressed or neurotic patients.

Whitehorn and Betz (1960) employed the Strong Vocational Interest Blank (SVIB) to investigate possible personality differences between A and B therapists. In an initial sample of 26 therapists (15 As, 11 Bs), they found that A and B therapists differed in their scores on four vocations. These four vocations were: lawyer and certified public accountant (As high, Bs low); printer and math-physical science teacher (As low, Bs high). A predictive scale of A-B status was developed from these differences in vocational interests. A point was scored for each matching of an individual's interest pattern with the constellation of vocations characteristic of the A therapists (high for lawyer and CPA, low for printer and math-physical science teacher). This scale has a score range of five points. The highest score (4) on this scale indi-

cates a matching between an individual's interest pattern and that of A therapists on all four vocations. The lowest score (0) indicates no matchings between an individual's interest pattern and that of A therapists on any of the four vocations. Points 4 and 3 on the scale (matching weighted toward the characteristic A therapist constellation) were expected to predict A therapists. Points 1 and 0 on the scale (matching weighted toward the characteristic B therapist constellation) were expected to predict B therapists. Point 2 on the scale (weighed equally between characteristic A and B patterns) was not expected to be predictive.

Whitehorn and Betz (1960) also examined the differences between these A and B therapists in terms of their responses to each of the 400 items composing the SVIB (Form M-1938). These A and B therapists differed significantly in their responses to 23 of the 400 items. Although not stating their selection criteria, Whitehorn and Betz then opted to use only ten of the 23 items in a second predictive scale. This scale has an 11-point range, a point being scored for each matching of an individual's responses with the characteristic A responses. Scores above the median (5) were expected to predict As, scores below the median were expected to predict Bs, while a median score was not expected to be predictive.

These scales were then used to predict success rates in another group of Phipps psychiatric residents, a sample of 24 therapists (Whitehorn & Betz, 1960). These validation studies were conducted not only to test the accuracy of these predictive scales but also to test Whitehorn and Betz's hypothesis that the important factor in the treatment of

schizophrenic patients lay in the therapist's personal qualities. "If . . . success in therapy with schizophrenic patients could be predicted in advance, with reasonably high reliability, from indicators of the doctors' characteristics, such a result would support the idea that the crucial determinants of success lay in the doctor" (Betz, 1962, p. 46). In this second sample of residents, the five-point scale turned out to be 80% correct in terms of A predictions and 67% accurate in terms of B predictions, while the 11-point scale was correct in its predictions of 77% of the A therapists and 83% of the B therapists.

At this stage in Whitehorn and Betz's research, the following important questions arose (Whitehorn & Betz, 1960): Are these results particular in some way to the specific psychiatric milieu and working points of view prevalent at the Phipps Clinic? Or do they have more general validity--i.e., would therapists with the same differential personal characteristics working in any clinical setting with schizophrenic patients have the same kind and degree of differential therapeutic results? To provide some answers to these questions, a sample of psychiatric residents trained and working with schizophrenics in a different hospital setting were studied (Whitehorn & Betz, 1960). This study involved 11 residents at a neighboring but autonomous psychiatric hospital, the Shepard and Enoch Pratt hospital (like the Phipps Clinic, a psychoanalytically-oriented facility). Strong Vocational Interest Blank protocols were obtained for each of the 11 residents. On the basis of each resident's responses, her/his position on the five-point scale and the 11-point scale were ascertained. In this group of residents, the five-point scale was 67% accurate in predicting therapist effectiveness

whereas the 11-point scale was 80% and 100% accurate in predicting A and B status, respectively. Although the number of therapists involved in this study is small, the similarity between these results and those with residents at the Phipps Clinic suggested that the personal qualities measured by these scales may have general implications for the treatment of schizophrenics. Seemingly because of its greater accuracy and ease of administration, later A-B studies have predominantly used scales based on responses to individual items (like the 11-point scale) rather than on vocational scale scores (like the five-point scale). These predictive scales of therapeutic effectiveness derived from the SVIB (as well as the later modifications and revisions of these scales) have come to be called A-B scales.

Further evidence that the A-B distinction reflects actual differences in therapeutic effectiveness was provided by research on success rates with "process" and "nonprocess" schizophrenics (Betz, 1963b). This study was designed to further rule out an alternative explanation of the differential success rates of A and B therapists--that the success differential between therapists was based on differences in the patients, those treated by A therapists being, in some way, clinically "easier" cases. A comparison was made of the success rates of A and B therapists treating schizophrenic patients in two prognostic categories, "process" and "nonprocess." This diagnostic designation was made by Dr. Christian Astrup, from Gaustad Hospital, Oslo, Norway, who completed an independent diagnostic review of case records at the Phipps Clinic. The psychiatric residents were divided into A and B groups on the basis of their score level on the SVIB scales for lawyer and math-physical science

teacher. In Whitehorn and Betz's (1960) previous research with the SVIB, the lawyer and the math-physical science teacher scales were found to have the highest correlations with A and B success rates, respectively, of the SVIB vocational scales. The patients' discharge status of improved or unimproved, as recorded in the hospital record, was used as the dependent variable. Differential success rates between A and B therapists were even more striking with "process" than "nonprocess" schizophrenics. With "process" patients, As had 71% improvement rates, and Bs, 18%; with "nonprocess" patients, As had 68% and Bs 44%. Since "process" patients are generally considered to be more difficult, it seems unlikely that the differential success rates between A and B therapists was due to the As' being assigned "easier" cases. These results seem once again to demonstrate that "the personality of the therapist is a crucial factor influencing psychotherapy with the schizophrenic patient" (Betz, 1963b, p. 1090). This study also suggests another patient variable in addition to diagnosis that may interact with therapist A-B status, prognosis or perhaps more generally, severity of disorder.

The first study to use an A-B scale to investigate therapist differences with nonschizophrenics was conducted by McNair, Callahan, and Lorr (1962). The 40 therapists involved in this research were more experienced than Whitehorn and Betz's psychiatric residents and the therapist sample included psychologists and social workers as well as psychiatrists. Therapist A-B status was defined on the basis of whether they scored above or below the median on Whitehorn and Betz's original 23-item A-B scale. Their patients were male, mostly neurotic outpatients

in treatment at seven V.A. clinics. They used several ratings of patient change: Taylor's Manifest Anxiety (MA) scale, Barron's Ego Strength scale, a symptom checklist, a self-satisfaction rating scale, therapist ratings of severity of illness, Interview Relationship changes (IR), and an Interpersonal Changes and Symptom Reduction scale (IC + SR). After four months and after 12 months of therapy, the patients of B therapists had demonstrated significantly more improvement than those of A therapists on the Barron Ego Strength scale, on the Taylor Anxiety Scale, and on therapist rating of severity of illness.

McNair et al.'s findings were seen to complement the Whitehorn and Betz studies on schizophrenics and led to further investigations of Therapist Type X Patient Diagnosis (As vs. Bs X Schizophrenics vs. Neurotics) interaction effects. Such interaction hypotheses have been predominant in the literature since McNair et al. although these authors offered alternative explanations for their results. They seemed to think that explanations based on social class and sex differences were as viable as those based on diagnostic differences. They pointed out the differences between the social class backgrounds of their patients and that of Whitehorn and Betz's. While 70% of their patient sample came from lower or lower-middle class backgrounds, only 30% of Whitehorn and Betz's patients came from such backgrounds (McNair et al., 1962). Most of Whitehorn and Betz's patient sample were from middle and upper-middle class backgrounds. McNair et al. (1962) suggested that the discrepancy between their results and those of Whitehorn and Betz may be related to these social class differences. In an analysis of the 23-item A-B scale, they noted that the items which differentiated As and Bs

reflected Bs' greater interest in skilled labor or technical activities. From this difference in interests, they inferred that Bs may have more similar backgrounds, more similar interests, or may be more familiar with the daily living problems of lower class patients (likewise A therapists with the middle class patients at Phipps). These similarities were seen to facilitate the establishment of an effective working relationship.

In a re-examination of the McNair et al. data (Lorr & McNair, 1966), another interpretation was offered for the discrepancy between their results and those of Whitehorn and Betz: Sex differences between the two patient samples were suggested to be the important factor in producing this discrepancy. Although Whitehorn and Betz did not indicate the sex breakdown of their patient sample, Lorr and McNair contended that more than half of Whitehorn and Betz's sample were likely to have been women. They based this contention on the fact that more women than men are hospitalized in university psychiatric facilities. They cited the finding that the A-B scale has been shown to correlate  $-.56$  with the SVIB Masculinity-Femininity Scale, As' having more stereotypical feminine interests, and Bs' more stereotypical masculine interests (Lorr, McNair, Michaux, & Raskin, 1962). Lorr and McNair (1966) suggested that As with their more "feminine" interests may have had more in common with the presumably mostly female Phipps patients, while Bs with their more "masculine" interests may have been more like the all male V.A. patients. Similarities on sex-role related variables were seen to affect the course of treatment, by facilitating the development of a therapeutic relationship or by leading to more effective therapeutic interventions.

When examined in conjunction with McNair et al.'s (1962) results, Whitehorn and Betz's initial work (1954) also suggests that other patient variables in addition to diagnosis may be involved in A-B related patient-therapist compatibility. As mentioned earlier, Whitehorn and Betz compared their initial A and B therapists in regard to effectiveness with nonschizophrenics (depressives and neurotics) as well as with schizophrenics. As mentioned above, while there were significant differences between these A and B therapists in success rates with schizophrenics, their results with neurotics and depressives were comparable. This difference from the McNair et al. results in which Bs were found to be more effective with nonschizophrenics, perhaps can be explained on the basis of social class and sex differences between the two patient populations. Whitehorn and Betz's nonschizophrenics (like their schizophrenics) probably consisted of more middle to upper class and more female patients than McNair et al.'s sample.

Draper (1967) investigated therapeutic effectiveness with schizophrenics in a very different clinical setting from Whitehorn and Betz's. Draper used less experienced therapists who employed ataractic drugs in addition to very short term "crisis" intervention therapy (for an average of five days) with schizophrenics from lower socioeconomic classes. In this setting, the more successful therapists tended to have SVIB profiles characteristic of Bs; the math-physical science teacher scale showed the highest correlation (.42) with the outcome criterion. Success was determined on the basis of discharge to the community versus discharge to a state hospital. In Draper's study, the decision to discharge a patient to the community was based upon the availability of

environmental supports in addition to symptom decrease and increased socialization. Because of the relative independence of the environmental support criterion from current patient behavior, the results of this study are difficult to interpret. If these results can be taken to indicate actual B superiority in this setting, Draper's findings are a reversal of Whitehorn and Betz's results with schizophrenics. These disparate results can perhaps be interpreted on the basis of social class differences between the two patient samples. Whereas 77% of Draper's patients were from lower class backgrounds, as mentioned above, only 30% of Whitehorn and Betz's patients were from such backgrounds. Draper's results are consistent with McNair et al.'s results with lower class neurotic patients. This convergence in results raises the possibility that B therapists may be more effective with lower class patients regardless of diagnosis.

Draper suggested that the brief length of treatment may have favored goals and skills more characteristic of B than of A therapists. He characterized Bs' approach to treatment on the basis of their high scores on the SVIB math-science teacher scale. He saw B therapists as having well-formulated, educative, rehabilitative, healing, and restorative goals. Whitehorn and Betz (1954) in their attempt to understand the factors which are involved in therapeutic effectiveness with schizophrenics, examined the treatment goals of A and B therapists. Symptomatic improvement and increased socialization, the criteria for discharge in Draper's setting, are exactly the goals Whitehorn and Betz found among their B therapists. Bednar and Mobley (1969), in a study of neurotic and schizophrenic out-patients, found that A and B therapists

differed in the areas in which they best effected change. As were better than Bs at effecting change in subjective distress (especially with schizophrenics) and in improving total adjustment, while Bs were more successful in facilitating impulse control (especially with schizophrenics). Whitehorn and Betz's and Bednar and Mobley's findings, thus, lend support to Draper's contention that A and B therapists may have different preferences and skills in regard to treatment goals.

Berzins, Ross, and Friedman (1972) investigated the success rates of three A and three B therapists who scored at the extremes of a 19-item A-B scale. These therapists conducted brief psychotherapy (for an average of three sessions) with schizoids and neurotics in a college counseling clinic. A therapists working with schizoids and Bs' with neurotics gave significantly higher appraisals of their own effectiveness than they gave when paired with the other type of patient. In facilitating improvement in presenting problems, As did significantly better than Bs overall (but especially with schizoids), and Bs did better with neurotics than with schizoids.

To the extent that schizoids manifest similar, although less severe, symptoms and interpersonal styles as schizophrenics, the Berzins et al. findings substantially corroborate those of both McHair et al. (1962) and Whitehorn and Betz (reviewed by Betz, 1962, 1967). As were found to be more effective with schizoids (like schizophrenics) and Bs to have their best success with neurotics. As' greater overall success with these patients may be related to their social class. If their status as college students can be taken to indicate middle class backgrounds, then this study supports and extends the trend of evidence re-

garding social class. It seems that A therapists may be more effective with middle class patients regardless of diagnosis.

Berzins et al.'s study indicates that brief length of treatment does not necessarily favor B therapists. Although Berzins et al.'s therapists may have had even less contact with their patients than Draper's therapists (an average of three outpatient sessions vs. an average five day inpatient stay, respectively), Berzins et al.'s A therapists performed better with both schizoids and neurotics. Perhaps the treatment goals of the college clinic were more suited to As than were those of the short-term hospital unit. In therapy with college students more "inner-oriented" goals would seem to be appropriate than in a short-term inpatient program for lower class people. College student outpatients would seem to be a more "psychologically-minded" population than lower class inpatients. Lower class people have repeatedly been found to conceptualize mental illness in somatic and external terms (Jones & Kahn, 1964; Levinson & Gallagher, 1967). Helping a college student to gain some insight into her/his reaction to current stress may relieve the student's subjective distress and allow her/him to resume her/his usual level of functioning. With severely disturbed and non-psychologically-minded patients, insight seems to be an inappropriate goal, especially in a very short-term program. To enable a patient to return to the community within a few days, it seems that a program should focus on control-oriented rather than insight-oriented goals and practical issues (e.g., finding a new place to live, arranging for outpatient therapy).

The relationship between the A-B distinction and therapeutic effectiveness has also been investigated by Bednar and Mobley (1969),

Bowden, Endicott, and Spitzer (1972), Koegler and Brill (1967), and Stephens and Astrup (1965). These studies obtained largely negative results in regard to the differential effectiveness of A and B therapists. These studies, however, involved methodological flaws which biased them against finding significant results. In their recent major review of the A-B literature, Heaton, Carr, and Hampson (1975) state, "These studies [the four studies listed above] are not considered fair tests of the hypotheses, however, since they had inadequate representations of therapists whose A-B scores qualified them as 'true B's'" (p. 301).

Razin (1971), in his earlier major review of the A-B variable, discussed additional flaws in Bednar and Mobley's and Stephens and Astrup's methodologies. Bednar and Mobley investigated the effect of therapist A-B status on the outcome of therapy with schizophrenic and neurotic outpatients. Examining ten pre-post therapy outcome criteria (MMPI; therapist, patient, and psychometrician ratings of current adjustment; Spitzer Psychiatric Status Schedule ratings of current distress, behavioral disturbance, impulse control, reality testing, and total adjustment; and a Q sort), the authors found positive patient changes on all 10 ratings. As mentioned above, As and Bs were found to differ in the areas in which they best effected change, with As more effective in relieving subjective distress and Bs more successful with problems of impulse control. Only the Q sort, however, yielded data confirming the interaction hypothesis (As vs. Bs X Schizophrenic vs. Neurotic). The authors, thus, concluded that the validity of the interaction hypothesis is highly questionable. Apparent biases in their therapist-patient pairings seem to make this conclusion unwarranted.

Razin (1971) pointed out that their finding of significant patient improvement across all patient and therapist categories suggested that these patients had not been randomly selected by their therapists and that "successful" therapy pairings were over-represented.

Stephens and Astrup examined the effects of insulin treatment, patients' prognosis (process vs. nonprocess), and therapist type (A vs. B) on discharge and follow-up status. Data on discharge status were available for the 334 patients who were hospitalized at the Phipps Clinic between 1950 and 1960 and Stephens and Astrup obtained 4-14 year follow-up data for 236 of these patients. Their sample of 334 patients included an overlap of 98 patients with Whitehorn and Betz's research. (Whitehorn and Betz had developed their A-B scales on 176 patients who were hospitalized at the Phipps Clinic between 1944 and 1955.) They classified the 63 therapists of these patients by four methods: the Whitehorn and Betz 5- and 11-point scales (Betz, 1962), a 3-point scale later used by Betz (1963a), and a 14-point scale suggested by McNair et al. (1962). Only 23 of the 67 therapists were classified the same on all four scales.

In general, they found almost no effect of A-B classification. In patients who did not receive insulin, no significant relation was found between discharge status and treatment by an A or B therapist as classified by any of the four methods. Differences, however, were in the predicted direction for all four classifications. There was also no significant relation between discharge status and treatment by an A or B therapist for patients receiving insulin. The only significant correlation between therapist type and discharge status was among process

patients not getting insulin with therapists rated on the 11-point scale (As' improvement rate was 82% and Bs' 58%). The authors noted that even this effect disappears when patients used by Whitehorn and Betz in devising the scales are excluded. No correlation between follow-up status and treatment by an A or B therapist was found.

Razin (1971) found Stephens and Astrup's study open to several methodological criticisms.

1. Their indices of follow-up status are crude: "letters, telephone conversations, and personal contact with the patients and their relatives" (Stephens & Astrup, 1965, p. 450). There is no mention of how consistently available each of these sources was, how they were weighed, checked for accuracy, etc.

2. The study is statistically unsophisticated. Instead of using analysis of variance, so that interaction effects could be examined, the authors computed correlations for each sub-group or sub-subgroup. Besides ignoring interaction effects, this procedure in its use of subgroups, restricts sample sizes and ranges and thus makes low nonsignificant correlations likely.

Razin also presented Betz's (1967) response to Stephens and Astrup's study. Betz contended that they had not attended to several crucial facts: (a) between 1955-1960, the percentage of "unimproved" patients decreased to about 30% from about 50% before 1950; (b) there was a corresponding decrease in the proportion of residents whose success rates met the B criteria; (c) for reasons not readily explained, between 1955 and 1960 only a few of the new residents entering training scored, by the Strong test criteria, as predictive Bs; and (d) this was the period when

ataractic drugs were introduced, making the sample unlike those of the Whitehorn-Betz research. (Although ataractic drugs would seem to have a marked effect on patient improvement rates, this variable was not controlled in Stephens and Astrup's study.) Razin thus concluded,

The Stephens and Astrup study seems riddled by too many flaws to "discount" or "disprove" the Whitehorn and Betz data. If they had statistically examined interaction effects and not "homogenized" so much heterogeneous data (ataractic drug vs. no drug; year to year differences in proportion of improved patients and of A therapists) it seems very likely that the nonsignificant (A-B) differences they found would have become significant (p. 8).

Ford and Urban also had strong methodological criticisms of the Stephens and Astrup research, "The study has so many methodological faults that negative or positive findings would be equally suspect" (p. 348). Because of the methodological flaws discussed above, the outcome studies with negative results have not been seen to offer substantive refutation of the research supporting the significance of the A-B variable.

In summary, the repeated findings that therapist A-B status can predict therapeutic effectiveness seems to indicate that the A-B variable taps treatment-relevant personal qualities. The range of treatment situations in which therapist A-B status has been found to be predictive of treatment outcome seems to provide particularly strong support for the relevance of the A-B variable as a set of therapist characteristics. Therapist A-B status has been found to be significantly related to therapeutic effectiveness in treatment situations differing markedly from the Phipps Clinic where Whitehorn and Betz conducted their research. The A-B variable has been found to be significantly related to

therapist effectiveness in therapist samples consisting of psychologists and social workers as well as psychiatrists, and varying in level of experience; in patient samples of neurotic as well as schizophrenic patients, of outpatients as well as inpatients, and of differing social class; and in treatment programs varying in length of treatment and goals of treatment.

The relationship between the A-B variable and treatment outcome seems to be a complex one. The effectiveness of A and B therapists seems to vary depending on the characteristics of the patient population and treatment setting. The research findings suggest that the patient variables of diagnosis, prognosis, social class, and sex may all interact with A-B therapist status. In the previous A-B research, however, the statistical analyses have been limited to Patient Diagnosis X Therapist Type (Schizophrenic vs. Neurotic X A vs. B therapist status) and Patient Prognosis X Therapist Type (Process vs. Nonprocess X A-B) interactions. To clarify the basis of A-B related differential compatibility with patients, it seems that further research on this variable should include analyses of its interactions with patient social class and sex. The present research includes such analyses.

Treatment variables that may contribute to the differential effectiveness of A and B therapists include length of treatment and orientation to treatment. As and Bs seem to have different preferences and abilities in regard to various kinds of treatment goals. A therapists seem to be more "inner-oriented" in their goals while B therapists seem to be more "externally-oriented" in theirs. A therapists seem to be concerned with changing subjective components (e.g., patients' subjec-

tive distress) and personality dynamics whereas B therapists seem to be interested in controlling socially unacceptable behavior (e.g., increasing impulse control and decreasing symptoms) and improving socialization. Length of stay may be related to these two types of treatment goals; As' treatment goals may be more suited to longer term treatment while Bs' goals may be more feasible than As' in short-term treatment. As' and Bs' reported differential preference and skill in regard to "inner-oriented" and "externally-oriented" goals, respectively, suggests a basis for differential compatibility with certain kinds of patients. Middle-class patients and women may be more oriented toward A-type goals, lower-class patients and men toward B-type goals.

The lack of uniform procedures for classifying subjects as As or Bs may be responsible in part for the complexity of the results on the A-B variable. Different versions of the A-B scale have been used in different studies. Since the intercorrelations among several of the versions are not particularly high (Razin, 1971; Kemp & Stephens, 1971), subjects classified as As or Bs by one procedure are not necessarily so classified by another. Also, the cut-off points for selecting A and B therapist groups has varied between studies. To select A and B groups, therapist samples have been dichotomized and trichotomized (with the upper and lower thirds designated as As and Bs, respectively), and extreme groups have been used as well as Whitehorn and Betz's cut-off points. Also, therapist sample size is an important determinant of the level of "A-Bness" examined, that is, small sample studies necessarily include only less extreme As and Bs.

In their recent reanalysis of the original Whitehorn and Betz data

collected over a 16-year period, Stephens, Shaffer, and Zlotowitz (1975) showed that all previously derived A-B scales are deficient in terms of correlation with the original criterion (the patient improvement percentages of the psychiatric residents in Whitehorn and Betz's samples). Stephens et al. also found that these scales were frequently deficient in terms of reliability as well. The reasons discussed for these deficiencies included:

1. The Whitehorn-Betz item selection procedures contrasted groups (As vs. Bs, as determined by therapists' patient improvement percentages) which were heterogeneous with regard to sex. All SVIB items derived were tacitly assumed to be equally valid for both sexes. Stephens et al.'s reanalysis revealed, however, that 12 of the 23 items selected by Whitehorn and Betz had negative correlations with patient improvement percentages for the 11 female residents in their sample. Furthermore, the correlation between patient improvement percentage and total score on Whitehorn and Betz's 23-item scale was  $-.02$  for these 11 female psychiatrists. These findings led Stephens et al. to conclude that the use of the female residents' data in the course of empirical item selection procedures could serve only to obfuscate relationships which apply primarily or exclusively to males who made up 85 per cent or more of Whitehorn and Betz's sample. Thus, several items potentially valid for males may have been overlooked by Whitehorn and Betz, and several invalid items retained.

2. In their scale construction, Whitehorn and Betz considered the A-B variable to be a dichotomy rather than a continuum. Although their criterion of therapist success, patient improvement percentage, is a

continuous variable, dichotomous A-B status was achieved by considering all therapists with patient improvement percentages of 68 per cent or higher as As. (Sixty-eight per cent was the average patient improvement rate in the therapist samples used in scale construction.) By dichotomizing their therapist samples, item selection was made, to a large extent, a function of the cut-off point used.

3. Criterion groups for previous A-B scales were formed over a 10- to 18-year period from samples of psychiatrists beginning their residencies sometime between the years 1944 and 1961 inclusive. Previous item selection procedures did not, however, consider and control for the confounding variables of changes in patient improvement percentages and changes in residents' SVIB response preferences over time. Stephens et al. found that both improvement rates and item response preferences were systematically changing in the psychiatrist samples over this time period. They cited Yule (1926) as pointing out that any two phenomena both changing monotonically over a specified time period must be correlated to a substantial degree, even though this correlation is likely to be spurious in any causal or dependent sense. Thus, it is likely that certain SVIB items on previous scales bear a spurious relationship to therapists' patient improvement percentages.

Taking into consideration the deficiencies of previous A-B scales, a new A-B scale was formulated and tested for adequacy by Stephens et al. This scale was shown to possess substantial internal consistency reliability and to have a high degree of correlation with the criterion (the continuum of therapists' patient improvement percentages) even after the removal of possibly contaminating factors such as the use of an-

cillary treatments, differences in patient prognosis, and changing practices and interests over time. For comparison purposes, the zero-order and partial correlations (year beginning residency and its correlates partialled out) with the continuous criterion were also computed for a number of previous A-B scales. Compared to the previous A-B scales considered, Stephens et al.'s scale was shown to have higher zero-order and partial correlations with the criterion. For example, the zero-order correlation of Whitehorn and Betz's 23-item scale and Campbell, Stephens, Uhlenhuth, and Johansson's (1968) 80-item scale, the two most important previous versions of the A-B scale were .51 and .68, respectively, whereas that for Stephens et al.'s 46-item scale was .77; the partial correlations were similarly Whitehorn and Betz's scale, .44, Campbell et al.'s scale, .57, and Stephens et al.'s, .70. Correlations were also computed with the criterion of dichotomous A-B status. The zero-order correlations for the scales mentioned above were as follows: Stephens et al.'s scale, .66, Campbell et al.'s revision, .62, and Whitehorn and Betz's scale, .49. It is noteworthy that Stephens et al.'s scale continued to maintain an advantage over earlier versions even though the latter were constructed to achieve their maximum "validity" at the 68 per cent breakpoint. Moreover, the same rank order of correlation prevailed when year beginning residency and its correlates were partialled out. Stephens et al.'s scale was also shown to compare favorably with previous versions of the A-B scale in terms of internal consistency reliability (Kuder-Richardson Formula 20 Coefficient Alpha). For example, a Coefficient Alpha reliability of .65 was found for Stephens et al.'s scale whereas the reliability of Whitehorn and Betz's 23-

item scale was previously reported to be .65 (McNair et al., 1962). Because of Stephens et al.'s scale's superior predictive validity and reliability, it was selected to be the measure of the A-B variable used in the present research.

Stephens et al.'s findings in regard to the predictive validity of A-B scales for female therapists have implications for the interpretation of previous A-B research results and for the design of further research on this variable. As mentioned above, Stephens et al. found that Whitehorn and Betz's 23-item scale had a correlation of  $-.02$  with patient improvement percentages for the 11 female therapists in their sample. Stephens et al. also assessed the validity of their new A-B scale for these female therapists. Scale-criterion correlations (both zero-order and partial) were computed; none of the scale-criterion correlations was statistically significant, and all but one were essentially zero. Stephens et al. concluded, "The use of any existing A-B scale with female subjects cannot be justified with reference to the original Whitehorn-Betz data" (p. 276).

The previous research on the A-B variable includes studies in which the therapist samples are comprised of female as well as male therapists (e.g., Bowden et al., 1972) and studies in which the sex composition of the therapist samples is not reported (e.g., Bednar, 1970). The studies which included males and females in their therapist samples combined the data for the two sexes prior to analysis. If the A-B scales' lack of validity for Whitehorn and Betz's female residents is generalizable to other samples of female therapists, the inclusion of females in the therapist samples of previous research may partly ex-

plain some negative findings reported in the literature. Combining the data from female therapists with that of male therapists could have added error variance and thus diluted otherwise significant effects. It seems that the generality of Stephens et al.'s negative findings for females needs to be assessed by further research since Stephens et al.'s analysis involved data from only 11 female therapists. The present research includes separate analyses of the data for males and females in an attempt to examine further the applicability of A-B scales to females and to remove a possible source of error variance.

### The Therapeutic Relationships of A and B Therapists

Whitehorn and Betz attributed the differential success of A and B therapists with schizophrenics to differences in the quality of the therapeutic relationships A and B therapists offer to such patients. Whitehorn and Betz (1954) rank-ordered 35 psychiatric residents who had trained at the Phipps Clinic at some time between 1944 and 1952 in terms of their success rates with schizophrenic patients; the seven residents with the highest success rates were designated as As, the seven with the lowest success rates were designated as Bs. The success rates of the As averaged 75%, that of the Bs 26%. Whitehorn and Betz conducted a retrospective analysis of the case records of 100 schizophrenic patients who had been treated by these A and B therapists. In these patients' case records, the discharge appraisal of their conditions as improved or unimproved was indicated; 50 of the 100 patients had been discharged as improved, 50 as unimproved. For those patients discharged as improved,

the quality of their improvement was evaluated in terms of three categories: (a) symptom decrease only, 21 patients; (b) symptom decrease and increase in social effectiveness only, 17 patients; and (c) symptom decrease, insight increase, and increase in social effectiveness, 12 patients. From a reading of the case records of the schizophrenic patients, Whitehorn and Betz formulated a checklist of categories of therapeutic approach. These categories were: (a) the type of relationship which the schizophrenic patient formed with the therapist, (b) the type of diagnostic perspective with which the therapist viewed the patient, (c) the type of strategic goals selected by the therapist as the primary focus of the therapy, and (d) the type of tactical pattern utilized by the therapist in actual contacts with the patient. Different styles of therapeutic approach were specified within each of the four categories. This checklist was completed for each of the 100 case records of schizophrenic patients. Whitehorn and Betz found that differences in clinical style within each of the four categories of therapeutic approach differentiated between improved and unimproved cases. Improvement in schizophrenic patients was most likely to occur:

1. When the patient developed a trusting, confidential relationship with her/his therapist (the following items give some indication as to how therapists were able to gain their patients' confidence);

2. When the therapist indicated in her/his personal diagnostic formulation some grasp of the personal meaning and motivation of the patient's behavior, going beyond mere clinical description and narrative biography;

3. When the therapist, in her/his formulation of strategic goals

in the treatment of a particular patient, selected personality-oriented goals rather than psychopathology-oriented goals, i.e., aimed at assisting the patient in definite modifications of personal adjustment patterns and toward more constructive use of assets rather than mere decrease of symptoms or vague "better socialization";

4. When the therapist in her/his day-to-day tactics made use of "active personal participation" (characterized by initiative in sympathetic inquiry, honest disagreement, challenging of self-depreciation, setting of realistic limits) rather than the patterns "passive permissive," "interpretation and instruction," or "practical care."

These findings were tested by statistical methods and were found to be significant at the .001 level. Within the group of improved patients, the above effective styles of therapeutic approach were associated with increased quality of patient improvement. Therapist A-B status was associated with clinical style within each of the four categories of therapeutic approach; A therapists were characterized by more frequent use of all four effective styles than were B therapists.

Whitehorn and Betz (1957) examined A and B therapists' styles of clinical approach with another sample of schizophrenic patients. This sample included 109 schizophrenic patients treated by 18 members of the resident staff between 1950 and 1954; 64 of the patients had been treated with psychotherapy only, 45 had been treated with psychotherapy combined with insulin treatment (none of the patients in the previous study had been treated with insulin). These patients comprised an entirely separate group from those in the previous study. All therapists who had treated patients in the span of years indicated above were included in

this study not just extreme groups as in the preceding study. Those therapists whose patients without insulin showed more than a 70% improvement rate (70% was the average improvement rate for these 18 residents) were labelled As, those whose improvement rates with such patients fell below that level were labelled Bs. (By dichotomizing all therapists instead of again using extreme groups, they made it more difficult for A-B differences to appear.) The checklist of categories of therapeutic approach used in the previous study was completed for each of the 109 patients in the new sample. For patients treated in psychotherapy only, As averaged an improvement rate of 81.5%, Bs 34.5%. The results with regard to styles of therapeutic approach fully confirmed the previous findings. The development of a confidential relationship by the schizophrenic patient, a motivational diagnostic formulation, a focus on personality-oriented goals, and "active personal participation" by the therapist were found to be associated with improvement rates at levels of statistical significance ranging between .05 and .001. Again these patterns of therapist approach were found more frequently in the A than in the B group.

The patients treated by insulin combined with psychotherapy had an improvement rate of approximately 82% whether they had an A or a B therapist. Thus, A therapists did not increase their improvement rates when insulin was used but B therapists experienced a marked increase in their improvement rates from 34% to 82%. Whitehorn and Betz compared the treatment patterns used by A and B therapists with psychotherapy only and with psychotherapy combined with insulin treatment patients. B therapists used the tactical pattern of "active personal participation"

with 54% of their psychotherapy and insulin patients in contrast with only 9% of their patients in psychotherapy without insulin, a difference approaching the .01 level of significance. Interestingly, this increase in "active personal participation" was not accompanied by an increase in the frequency with which the patient developed a trusting, confidential relationship with the therapist. Whitehorn and Betz suggested that the more frequent use of "active personal participation" by B therapists when insulin is combined with psychotherapy may account in considerable part for the greater numerical improvement of Bs' patients in such treatment. Whitehorn and Betz also compared the quality of improvement of patients in psychotherapy only and in psychotherapy combined with insulin treatment. They found that the numerical increase in Bs' improvement rate between these two treatment conditions was not accompanied by an increase in quality of improvement. Only one B patient reached the highest level of improvement (symptom decrease, insight increase, and increased social behavior) and in this case insulin was not used. This finding in regard to quality of improvement suggests another interpretation of Bs' differential success between the two treatment conditions: Drug effects may have been primarily responsibility for B therapists' greater success with patients in psychotherapy combined with insulin treatment. The areas in which Bs' patients showed improvement, primarily symptom decrease and also increased social behavior, are areas of functioning which can be strongly affected by somatic treatment. Bs' increase in "active personal participation" may, therefore, be a consequence and not a cause of the higher improvement rates with patients in combined psychotherapy and insulin treatment. Results discussed earlier

with "process" and "nonprocess" schizophrenics suggested that Bs are more effective with less severely disturbed patients (Betz, 1963b). Thus, if patients' disturbed behavior was decreased by insulin treatment, B therapists may have been more willing to become engaged with them.

Segal (1971, 1972) investigated the actual in-therapy behavior of A and B therapists. Tape recordings of A and B therapists with neurotic outpatients were examined. There were two tape recordings of each relationship with a minimum of two weeks between recordings. He found that therapist response styles did not differ significantly between sessions, seeming to indicate the stability of such styles. The therapists' activity was evaluated by three content analysis systems: (a) Interaction Process Categories (Bales, 1950), (b) Therapist's Directiveness, adapted from Strupp's (1960) Measures for Analyzing Psychotherapeutic Interactions, and (c) Therapist Specificity, adapted from Leonard and Bernstein's (1960) Categories for Evaluating Psychotherapists. Segal's results seemed to support Whitehorn and Betz's findings. Segal found A therapists to be more active, personal, intense, directive, and interpretative; and Bs to be more reflective. The in-therapy behavior of Segal's A and B therapists seem to correspond to the tactical patterns of "active personal participation" and "passive permissive," respectively, conceptualized by Whitehorn and Betz (1954). (Whitehorn and Betz had found that Bs' tend to be either passive and permissive or directive and restrictive; Segal's Bs seemed to take the former approach.) This correspondence between Segal's results and Whitehorn and Betz's suggests that A and B therapist styles do not change substantially be-

tween therapy with neurotics and schizophrenics. Thus, Segal's results seem to confirm Whitehorn and Betz's findings that therapist A-B status is related to consistent differences in definition of the therapist role. Also, the apparent consistency in A and B therapist styles between therapy with schizophrenics and neurotics suggests that differential reactions to their characteristic styles by schizophrenics and neurotics may mediate differences in therapist effectiveness.

Beutler, Johnson, Neville, and Workman (1972) also investigated the in-therapy behavior of A and B therapists. They had independent "blind" raters assess the degree of accurate empathy shown by psychiatric residents during the first interviews with their patients. They found that A therapists with schizophrenics and B therapists with neurotics demonstrated more empathy than each did with the other type of patient. Beutler et al.'s results suggest that while A and B therapists' "style" may not show substantial variation between therapy with schizophrenics and neurotics, other aspects of the relationship they offer patients may differ significantly between patient types.

Only one study has looked at the participants' (therapists and patients) perceptions of therapeutic relationships of A and B therapists. In this study, Bednar (1970) asked therapists and patients to rate the therapy relationship on the Relationship Questionnaire (Truax & Carkhuff, 1967). The Relationship Questionnaire taps five dimensions of the therapeutic relationship: (a) empathy, (b) warmth, (c) genuineness, (d) interpersonal intimacy, and (e) concreteness. The therapists and patients rated the therapeutic relationship at the end of the fifth session of outpatient therapy. Schizophrenic and neurotic patients were

included in the study. In terms of composite scores (Bednar did not report subscale scores), he found (a) no differences between therapists' and patients' ratings, (b) no overall differences between A and B therapists, and (c) no differences between the various patient-therapist pairings. In interpreting his results, Bednar first stated, "Whatever the cause may be for the differential success of A-B type therapists as reported, such success does not appear to be related to differences in the overall therapeutic relationship offered by the therapists" (p. 122). He, however, later modified this statement by suggesting that the discrepancy between his results and those of Whitehorn and Betz may have been due to differences in the vantage point of the raters. He suggested that if he had used independent, trained judges as were Whitehorn and Betz rather than members of the therapeutic dyad, his results might not have been discrepant.

Bednar's study does not seem to be a fair test of the hypotheses that differences in quality of the therapeutic relationship mediate the A-B variable's effects or that therapists and patients can perceive these differences. His study seems to have a number of methodological weaknesses that make his results questionable. Perhaps the most serious flaw of his study involves the therapist sample used. The therapists in his study were drawn from a population of therapists participating in a national investigation of the effects of counseling and psychotherapy. This population of therapists included M.D.s and Ph.D.s, and male and female therapists. Of the 165 therapists who completed the A-B scale, the highest scoring 25% were designated As and the lowest 25% were designated Bs. Since a substantial proportion of Ph.D.s are women, the in-

clusion of Ph.D.s as well as M.D.s in his therapist population suggests that there was a sizeable number of women in that population. Lorr & McNair (1966) reported that in a large group of therapists nearly all of the females were classified as Type A. Thus it seems likely that a considerable proportion of Bednar's A therapists were women. As discussed above, Stephens et al.'s (1975) recent reanalysis of Whitehorn and Betz's data indicated that existing A-B scales might not be valid for female therapists. Thus, if Bednar's sample of A therapists did indeed include a substantial proportion of women, he may not have been comparing "true As" with Bs. Effects which might have been significant had only male As been used could have been diluted and perhaps made insignificant by error variance introduced by the inclusion of female As. Bednar's failure to find a difference in the therapy relationships of As and Bs may also be related to his only reporting composite scores. There may have been significant differences between As and Bs on the subscales which were obscured in the composite scores. Beutler et al. (1972) found differences between A and B therapists in "accurate empathy" when measured by independent raters. Perhaps, Bednar's As and Bs differed on empathy but not on the other dimensions of the Relationship Questionnaire. Or, his A and B therapists may have scored high and low on different dimensions of the Relationship Questionnaire thus resulting in comparable composite scores. Bednar also did not report his results in terms of patient social class or sex. Since A-B outcome literature has suggested that these variables may have significant interaction effects with the A-B dimension, this omission adds further difficulty in interpreting his results.

### The A-B Variable and Personality Characteristics

Because the A-B variable is measured by SVIB items selected on an empirical basis, it is not clear from an inspection of these items what relevant therapist personality characteristics are tapped by the A-B variable. Attempts to understand the meaning of the A-B variable have employed various approaches to identify possible personality correlates of this dimension. A-B scales have been correlated with standardized psychological measures of interests, cognitive and perceptual styles, and other personality characteristics. This approach to understanding the A-B variable seems to view A-B scales as measures of personality traits; A-B scales are seen to measure generalized, stable modes of functioning not limited to the therapeutic situation. Basically, A and B therapists are viewed as different kinds of people.

### SVIB Research on the A-B Variable

SVIB research (Campbell, Stevens, Uhlenhuth, & Johansson, 1968; Whitehorn & Betz, 1960) has shown A therapist interest patterns to be similar to those of lawyers, certified public accountants, author-journalists, artists, librarians, advertising men, and ministers. B therapists reported interests similar to those of printers, math-physical science teachers, carpenters, pilots, veterinarians, and farmers. Based upon these results and somewhat stereotyped notions about people in the various professions, As and Bs have been characterized as verbal-intellectual "thinkers" and practical-mechanical "doers," respectively. The verbal-intellectual As are seen as more like middle to upper class

patients and female patients, and the practical-mechanical Bs as having more in common with lower class and male patients. These patient-therapist similarities in interests have been posited to facilitate communication and the establishment of an effective working relationship.

Based upon the SVIB interest patterns and the data on differences in clinical styles and treatment outcome, Whitehorn and Betz (1960) developed further characterizations of As and Bs and suggested other bases for A-B related patient-therapist compatibility:

The As, with interests resembling those of lawyers, have a problem-solving, not a purely regulative or coercive approach. This is acceptable to the resentful, boxed-in [schizophrenic] patient likely to respond to prescriptive pressures by more withdrawal and, to mere permissiveness by inertia. . . . The B doctors with attitudes resembling those of printers--black or white, right or wrong--are likely to view the patient as a wayward mind needing correction, an approach likely to alienate him further rather than intrigue him into hopeful effort . . . .

In the A physician [the schizophrenic patient] would find the values of responsible self-determination more honored and exemplified than those of obedience and conformity. . . . The A physicians reveal a capacity to be perceptive of the individualistic experiences of the patients, while themselves functioning in responsibly individualistic modes. . . .

In the B physicians, in contrast, the patient would find an emphasis on value systems weighed more heavily toward deference and conformity to the way things are. The particular rigidity of attitude implied by their mechanically inclined interests and orientation toward precision and a rule-of-thumb approach probably constitutes an actual hindrance to the development of self-trust and social spontaneity in the schizophrenic patient (p. 964).

Betz (1963a) sought to substantiate the A-B dimension as a basic distinction in personality types by comparing the interest correlates of A-B status in a broad, independent sample of the population with its in-

terest correlates in a sample of psychiatric residents. Therapists were classified as As or Bs on the basis of their scores on the lawyer and math-physical science teacher scales of the SVIB. Those residents scoring high on the lawyer scale but not on the math-physical science teacher scale were designated as As; those residents with the opposite pattern of high and low scores were designated as Bs. To determine the interest correlates of the lawyer and math-science teacher scales in an independent sample of the population, Betz utilized data gathered by Strong (1943). This data consisted of correlations found to exist between each of the 44 vocational interest scales and every other scale, based on 285 Stanford seniors. From this data, Betz determined which vocational scales tended to correlate similarly with the lawyer and math-physical science teacher scales and which tended to correlate oppositely with these two scales in Strong's sample. The correlations of these two vocational scales were characterized by areas in which they clearly overlapped (e.g., the physician scale correlated  $+0.16$  with lawyer and  $+0.17$  with math-physical science teacher) and by areas in which they clearly separated (e.g., carpenter correlated  $-0.78$  with lawyer and  $+0.68$  with math-physical science teacher, whereas advertising man correlated  $+0.74$  with lawyer and  $-0.74$  with math-physical science teacher). Betz then rank-ordered the scores of the A and B therapists on the 44 vocational scales. A striking degree of correspondence was found between the areas of overlap and areas of separation for A and B therapists' rankings on the vocational scales and the pattern of overlap and separation that characterized the correlations of the lawyer and math-physical science teacher scales. Betz thus contended, "This correspondence ap-

pears to be sufficient to support the conclusion that the differences between the two groups of psychiatrists were not unique but reflect real lines of cleavage widely occurring in human nature" (1963a, p. 207).

### Perceptual and Cognitive Styles of A and B Therapists

Using Witkin's Rod and Frame Test (RFT) with the original group of Whitehorn and Betz therapists, Pollack and Kiev (1963) found the Bs to be more "field independent" than the As (.025 level of significance). This means operationally that Bs were more successful at attending to relevant proprioceptive cues and ignoring distracting external cues in this complex perceptual task. In terms of the norms for this task, As were characterized as moderately field-independent and Bs as extremely field-independent. Silverman's (1967) review of research on field-dependence and field-independence cited evidence that extremely field independent people tend to be relatively: (a) less affectionate, less interested in other people, more involved in cognitive pursuits; (b) intellectual and impersonal in their approach to problem-solving, and less attentive to social cues; better at remembering aspects of non-social problem situations than they are at remembering faces and words with social connotations; and (d) successful at maintaining an objective, rational orientation during sensory deprivation (when others experience depersonalization and "primary process" thinking).

From these data and from A-B research, Silverman has developed "composite" descriptions of A and B therapists:

A and B psychotherapists perceive various aspects of their physical and social worlds differently. They also perceive

their patients differently. The A type. . . is responsive to more stimulus attributes of the perceptual field including incidental social behavior cues. . . to the effects of seemingly irrelevant stimulation, and to changes in the organization of the perceptual field. [S]he is more capable of relaxing [her/] his orientation to reality and responding to hunches and intuition. . . thus more accepting of the "realness" of the schizophrenic's perceived unreality, of [her/]his "spread of meaning," [her/]his depersonalization experiences and [her/]his awe and terror. Overall, the perceptual responses of the A-type therapist are more similar to those of the schizophrenic patient than are those of the B-type therapists. The dominant perceptual tendency of the B therapist is to counteract stimulus effects which interfere with articulated, reality-tuned cognitive activity. Problem-solving attempts are empirically oriented rather than intuitively oriented. . . . B therapists usually communicate better with neurotic [than schizophrenic] patients, since they share with such patients similar perceptions of reality and unreality. Understanding another person depends to a significant degree on perceiving the world from a similar frame of reference (p. 12).

Thus, Silverman seems to view patient-therapist similarities in cognitive and perceptual styles as underlying A and B therapists' differential success rates. He seems to see the communication of perception sharing as an important, perhaps crucial, ingredient in therapeutic effectiveness.

Carson (1967) pointed out that females tend to be more field-dependent than do males. He used this finding to support Lorr and McNair's (1966) hypothesis that sex differences may interact with the A-B variable.

#### Reactions to Stress and A-B Status

Berzins, Friedman, and Seidman (1969) found that college clinic patients seen as intro-punitive by their therapists scored in the A direction on an A-B scale, while those with extrapunitive ratings had B-

type interest patterns. Intropunitive and extrapunitive modes of reacting to stress have been posited to be characteristic of neurotic and schizoid adjustments, respectively (Phillips & Rabinovitch, 1958). Since A therapists seem to do better with schizophrenics (and schizoids) and B therapists with neurotics, patients may do best with therapists whose interest patterns are opposite from their own.

This "complementary difference hypothesis" assumes that Berzins et al.'s intropunitive and extrapunitive patients are similar in at least some relevant respects to the neurotic and schizophrenic (and schizoid) patients, respectively, used in previous research. No study, however, has actually administered the A-B scale to patients diagnosed schizophrenic or neurotic. Furthermore, no study has attempted to directly demonstrate that patient-therapist A-B differences do relate to therapy outcome. Berzins et al. conducted a correlational study on patients' modes of reacting to stress and their A-B scores but did not go on to conduct an outcome study with these patients. The evidence for their "complementary difference hypothesis" seems basically inferential rather than empirical.

Berzins et al. suggested that the association they found between A-B status and response to stress may apply for therapists as well as for patients. By extrapolating the findings for A and B patients to therapists, A therapists were seen to be intropunitive and B therapists extrapunitive. Berzins et al. then suggested that therapists may have "blind spots" when working with patients who are similar to themselves in terms of characteristic response to stress. Berzins et al. also interpreted their findings on the basis of patient-therapist differences

in social orientation. They cited Swenson's (1967) hypothesis that the A-B dimension is an interpersonal approach-avoidance dimension. Berzins et al. contended that patients may profit from working with those therapists whose social orientations are opposite from their own. The withdrawn schizoid or schizophrenic patient is seen as needing an affiliative, approaching (A-type) therapist to help her/him get involved in treatment whereas the neurotic patient may do as well with a more reserved (B-type) therapist.

### The A-B Variable and Personality Inventories

Berzins, Barnes, Cohen, and Ross (1971) compared A and B therapists and A and B male undergraduates on Jackson's (1961) Personality Research Form, a multidimensional personality inventory. They found that the correlates of A-B status were highly similar in the therapist and undergraduate samples. In both samples, As and Bs differed significantly in their scores on five of the Personality Research Form's scales: Harmavoidance, Dominance, Order, Desirability, and Achievement. Bs' profiles reflected more social poise, more openness to complex new experiences, and more ascendant orientations in cognitive-social areas than did the profiles of the As. These results were seen as confirming earlier evidence that Bs have more culturally masculine characteristics.

Berzins, Dove, and Ross (1972) sought to examine further whether A- and B-type therapists are personologically similar to other A- and B-type individuals. They determined the personality correlates of A and B status in samples varying in vocational commitment/training, sex, education, and adjustment. A and B individuals among male therapists,

male undergraduates, male college clinic patients, and female undergraduates were compared in terms of their profiles on Jackson's Personality Research Form. Individuals were classified as As or Bs within each sample by selecting the upper and lower quartiles on a 19-item A-B scale. On the A-B scale, the scores of male therapists and male students did not differ among themselves but exceeded those of male patients and female students (high scores indicated B-status), and male patients exceeded female students. Thus, the cut-off points for determining A and B status varied among samples. In every sample, B type individuals exceeded A type individuals on the Personality Research Form scales measuring risk-taking, dominance, change, sentience, and "counterdependence." The differences between the profiles of As and Bs were used to classify persons within these samples in terms of A-B status; the scale measuring risk-taking (the opposite end of this dimension is labeled harmavoidance) was the best single predictor of A-B scale scores in each of these samples. This consistency in the personality differences between As and Bs across samples seems particularly striking when it is considered that the score composition of the A and B categories varied among samples. Berzins et al.'s results seem to provide substantial evidence for Betz's (1963a) contention that the A-B variable reflects a basic distinction in human personality types.

Berzins et al. suggested on the basis of their findings that female As and Bs could be expected to perform comparably to male As and Bs on personality grounds. Although, as mentioned above, female therapists' A-B scale scores were not found to be predictive of therapeutic effectiveness for the 11 females in Whitehorn and Betz's therapist samples

(Stephens et al., 1975), Berzins et al.'s results seem to indicate that further investigation of the performance correlates of A-B scores in females is warranted.

#### The A-B Variable and Personality Characteristics: A Summary

The research on the personality correlates of A-B status has consistently found that A and B therapists differ in terms of personality characteristics, substantiating the contention that the A-B variable taps a basic distinction in personality types. These findings of differential personality characteristics have generated hypotheses as to the nature of therapist-patient compatibility based on the A-B variable. These hypotheses have focused upon therapists' a) similarities with patients; b) complementary differences from patients; and c) characteristic leadership styles. To elaborate, patient-therapist similarities in interests and cognitive and perceptual styles have been seen as facilitating communication and relationship-formation; patient-therapist complementary differences in reactions to stress and social orientations have been viewed as lessening therapists' "blind spots" and facilitating the development of an effective working relationship, respectively; and the apparent emphasis of A therapists' value systems on individuality (in contrast to Bs' purported emphasis on conformity) has been seen to encourage the schizophrenic's discovery of and respect for her/his inner resources.

The most important finding on the personality correlates of A-B status in regard to the present research seems to be the consistency of the personality correlates of A-B status across samples of therapists

and non-therapists. To review, Betz (1963a) found that the interest correlates of A-B status (as measured by the lawyer and math-physical science teacher SVIB scales) in psychiatric residents were strikingly similar to the interest correlates of the lawyer and math-physical science teacher scales in Strong's sample of college students. Berzins et al. (1972) found that the personality correlates of A-B status were highly similar across samples varying in vocational commitment/training, sex, education, and adjustment. Thus, the preceding research seems to provide a basis for expecting other A and B mental health workers such as psychiatric nursing staff members to be personally similar to A and B therapists.

## CHAPTER II

## THE A-B VARIABLE AND OTHER HELPING RELATIONSHIPS

Analogue Research

Previous clinical research on the A-B variable has been limited to the relationship between a professional therapist (psychiatrist, psychologist, or social worker) and her/his patients. Several analogue studies, however, have involved other types of helpers and their results suggest that the A-B variable may be relevant to other helping relationships.

Trattner and Howard (1970) investigated the relationship of attendants' A-B status to their interaction with schizophrenic patients on an experimental task. This study was conducted at Boston State Hospital. Two A and four B attendants were selected from the 28 (of 118) attendants who had returned the A-B scale; they were selected on the basis of A-B scores and no previous contact with the patients involved in the research. The schizophrenic patients were rated on a premorbid social competence (SC) scale, rating age, marital status, occupational and educational level, and classified as high- or low-SC. Eight patients were assigned randomly to each attendant. The attendants administered the Rosenthal picture-rating task to each of their assigned patients. The patients were to rate the "successfulness" of ten people whom they saw in photos. These ten photos were standardized and each elicited an average rating of "zero" (neutral) in previous research (+10 and -10 were the extremes). Just before testing each patient, attend-

ants were told that the patient was either of a "personality type" that averaged +5 or -5 ratings. A attendants were found to bias low-SC patients in both "+" and "-" directions more than did Bs; and Bs biased high-SC patients more than did As ( $p = .05$ ).

Trattner and Howard had 13 Harvard College males rate tapes of the attendants in the above experimental task. The attendants were rated on nine qualities: discomfort, awareness of the other, dominance, professionalism, masculinity, coldness-distance, sophistication, self-confidence, and warmth-friendliness. (Interrater reliabilities were fairly high, ranging from .58 to .96, with a median of .77). There were no A-B differences on any of the nine, but there were significant Patient X Attendant (SC X A-B) interactions on all nine: As with low-SC patients and Bs with high-SC patients were rated higher (than in opposite conditions) on all qualities but discomfort and coldness, on which they were rated significantly lower (overall  $p = .03$ ).

Trattner and Howard's results indicate that both A and B attendants discriminate between high- and low-SC patients and that this discrimination affects their styles of communication with these patients. Also, high- and low-SC patients seem to have differential receptivity to the influence of A and B attendants, seemingly, at least in part, because of these attendants' differential responses to such patients. These results seem to have some correspondence with research on A and B therapists. As discussed above, Betz (1963b) reported that A therapists' superiority over Bs was more marked with "process" than "nonprocess" schizophrenics while Bs had their best success with "nonprocess" schizophrenics. Stoler (1966) had A and B psychiatric residents listen to tapes of

"process" and "nonprocess" schizophrenics. A therapists rated the schizophrenics as more likeable than did Bs. There was a significant difference between Bs' ratings of "process" and "nonprocess" schizophrenics, Bs' finding "nonprocess" schizophrenics more likeable. A therapists did not differ significantly in their ratings of the two types of schizophrenics. Thus, both A therapists and A attendants have a more positive affective response to and are more effective with poor prognosis schizophrenics in comparison with their corresponding B types. B therapists and B attendants are similar in that they both have their most favorable affective reaction to and are most effective with good prognosis schizophrenics. These correspondences between A and B therapists and attendants seem to support hypotheses as to the personological similarity of A and B therapists and other A and B individuals, and also to suggest that the A-B variable may have performance correlates in other helping roles.

Berzins, Ross, and Cohen (1970) examined the interpersonal and situational determinants of self-disclosure in "resistive" patients. Psychiatric aides conducted brief interviews with narcotic addict patients. Participants' A-B status and patients preinterview sets to "trust" or "distrust" the aides comprised the independent variables. Aides and patients were selected for participation in this study on the basis of their placing within the upper or lower thirds of the respective distribution of A-B scores. Prior to the interview, aides were given 12 cards indicating interview topics and were encouraged to explore the topics in depth during the 20-minute interview period. Six of the topics covered personal areas, six neutral areas. The patients' preinterview

sets to "trust" or "distrust" the aides were intended to stimulate behavior characteristic of neurotic and schizoid adjustments, respectively. The interviews were taped and judges rated the number of topics explored and depth of exploration. The participants were also rated on ten personal characteristics by the judges (e.g., warmth, self-confidence, professionalism, dominance). Following the interviews, aides and patients filled out post-experimental ratings dealing with reactions to their partners and to their own behavior (e.g., ease of communication, degree of trust, emotional involvement).

A type aides with "distrusting" patients and B type aides with "trusting" patients obtained better patient self-disclosure in "personal" topical areas than oppositely paired dyads ( $p < .0005$ ). This interaction effect was not significant for neutral areas. The results for number of areas explored did not indicate a significant interaction effect. Contrary to Berzins et al.'s hypothesis that pairings involving opposite A-B status should outperform dyads involving the same A-B status, the results for depth of self-disclosure bordered on significance in the opposite direction.

The post-experimental ratings were related to the two measures of performance. When patients' self-disclosure had been judged to be good, aides tended to like and trust the patients, to see them as relatively "open" and to feel that it was easy to communicate with them. Patients, in turn, agreed that communication was easier and indicated that they had been emotionally involved and that the interviews had been of help. Number of areas explored, on the other hand, appeared to have the opposite implication; exploration of many (rather than few) areas was asso-

ciated with mutual difficulties in communication. These results seemed to indicate that depth of self-disclosure rather than number of areas explored was the more valid measure of self-disclosure in this study.

The partial agreement of the participants with regard to reactions associated with the dependent measures, however, did not extend into reciprocity in reaction to one another. Intercorrelations of the 14 parallel ratings made by both participants showed an almost total absence of mutuality (correlations ranged from .26 to -.25, all nonsignificant). Aides and patients appeared to have employed very different perspectives in forming their evaluative and affective reactions to the interview.

Judges' ratings of the participants yielded only one significant result: A type aides were seen as "warmer" ( $p < .02$ ). Patients, in their post-experimental ratings, had tended to rate A type aides as more "open" ( $p < .10$ ). These ratings by judges and patients are consistent with previous descriptions of A and B therapists and offer some support for the personological similarity of A and B psychiatric aides to their therapist counterparts.

Consistent with Trattner and Howard's results, Berzins et al.'s data also seem to suggest that A-B status in psychiatric aides, as in therapists, may be indicative of differential compatibility with various types of patients. If Berzins et al.'s "trusting" and "distrusting" patients can be taken as similar in relevant respects to neurotic and schizophrenic patients, respectively, Berzins et al.'s results provide further evidence that the patient variables significant in interactions with A-B therapists may also be significant in interactions with A-B

aides.

Additional evidence that the A-B distinction may apply to helping relationships beyond the traditional therapist-patient relationship can be found in a study by Lynch (1974). Lynch investigated the interview behavior of ghetto citizens with police officers. The ghetto citizens and police officers had volunteered to participate in the study. The police officers were recruited from a continuing education course. The ghetto citizens resided in a Model Cities area and were contacted by community workers. The police officers and ghetto citizens had not had previous contact with each other. The police officers were administered an A-B scale and those scoring in the upper and lower quartiles were selected to participate in the interviews. The police officers were all males and white; the ghetto citizens were all males and black. Lynch used Berzins et al.'s (1970) interview structure. That is, the police officers attempted to elicit self-disclosure in six personal and six neutral topic areas during a 20-minute interview. Following the interviews, the police officers and ghetto citizens filled out post-experimental ratings (Lynch's post-experimental rating forms differed from Berzins et al.'s). The participants rated their reaction to the other dyad member, and completed semantic differential ratings of both themselves and the other dyad member. In addition, the ghetto residents filled out the A-B form.

Tapes of the interviews were rated on number of areas explored and average depth of citizen self-disclosure. No significant differences were found between A and B police officers but the results tended to favor Bs. A and B interviewers had rated their interviewees on trust,

similarity to interviewer, personal difficulties, and likeability. Bs rated the interviewees as significantly more likeable than did As ( $p < .05$ ). Interviewees had rated the interviewers on (a) how likeable he felt the interviewer was, (b) the interviewer's degree of interest in him during the interview, (c) how trustworthy he felt the interviewer was, and (d) how similar he felt the interviewer was to himself. Bs were rated significantly higher in likeability ( $p < .02$ ) and tended to be rated higher in trustworthiness ( $p < .10$ ). On the semantic differential, citizens interviewed by As rated themselves as significantly less active ( $p < .035$ ) and tended to rate themselves as less potent ( $p < .07$ ) than did those citizens interviewed by Bs. On the A-B form, ghetto citizens' mean scores were in the A range and there was no significant difference in the A-B status of the two interviewee groups.

B interviewers' more positive interaction with the ghetto residents was explained on the basis of the residents' social class and A-B status. It was suggested that B interviewers may be more successful with lower class interviewees. The results were also discussed in terms of a "complementary difference hypothesis"; it was proposed that interviewer B status may have interacted favorably with the predominant A status of the ghetto citizens.

As discussed above, Berzins et al.'s (1970) results with psychiatric aides and narcotic addict patients did not confirm a "complementary difference hypothesis" of A-B status pairings; their narcotic addict patients tended to disclose more to psychiatric aides of the same not opposite A-B status. Berzins et al.'s contrasting results in regard to an A-B status pairing hypothesis suggests that Lynch's findings

may be better explained in terms of an interaction with ghetto citizens' social class status.

In summary, the above analogue studies suggest that the A-B variable may be related to role performance by other helpers as well as traditional therapists. The A-B variable seems to be a significant dimension in helper-helpee interactions beyond the therapist-patient relationship. The A-B status of other helpers has been found to be related to differential effectiveness with various helpee samples: Psychiatric attendants' A-B status was significantly related to differential ability to inadvertently influence high- versus low-social competence schizophrenics (Trattner & Howard, 1970) and to obtain self-disclosure from "trusting" versus "distrusting" narcotic addicts (Berzins et al., 1970); similarly, police officers' A-B status tended to be related to their obtaining self-disclosure from ghetto citizens (Lynch, 1974). It seems that this differential effectiveness may have been mediated by differences in the quality of the relationships that developed between A and B helpers and various types of helpees: A and B attendants were found to have differential styles of communication with low- and high-social competence schizophrenics (Trattner & Howard, 1970); police officers' A-B status was shown to be related to the officers' liking for ghetto citizen interviewees and these interviewees' liking and trusting the officers (Lynch, 1974). The A-B status of these other helpers seems to interact with those patient characteristics that have appeared to be significant in A-B therapist-patient pairings, patients' prognosis, schizoid versus neurotic adjustment (as reflected in "distrusting" vs. "trusting" behavior, respectively), and perhaps social

class and A-B status. This similarity between other A and B helpers and their therapist counterparts in terms of compatibility with various types of helpees appears to lend support to hypotheses as to the personological similarity of A and B individuals across various demographic and clinical characteristics.

The aim of the present research is to extend the investigation of the relevance of the A-B variable to other helping relationships. The helping relationship selected for investigation is that between psychiatric nursing staff members and patients. This research examines the effects of nursing staff members' A-B status on their interactions with patients in the context of their actual work roles. This study is the first clinical investigation of the A-B variable's effects in a helping relationship other than the patient-therapist relationship.

#### The Impact of Nursing Staff-Patient Relationships

The relationships between nursing staff members and patients were selected for investigation because much empirical evidence indicates the impact these relationships can have on a patient's clinical course. Shader, Kellam, and Durrell (1967) examined the relationship between initial nursing staff attitudes toward psychotic patients and treatment outcome. Statements on attitude or feeling were rated daily by members of the nursing staff with regard to each of the patients on the ward during the first week after admission. The nursing staff were asked to rate: (a) how likeable the nurses considered the patient, (b) how angry they were at the patient, and (c) how optimistic they were about the pa-

tient's recovery. Those patients diagnosed as schizophrenic were evaluated in terms of prognosis; conventional case history prognostic indicators were used such as the presence of confusion and disorientation in the initial mental state, the presence of depressed affect, and the acuteness of the onset of symptoms. Schizophrenics with better initial prognoses evoked more optimism and liking. No correlation was found between the prognostic indicators and staff anger. Initial staff attitude toward patients was found to bear a very strong relationship to their status at discharge. The prognostic indicators, on the other hand, were related in the expected direction but the relationship did not reach a significant level. Thus, Shader et al.'s research indicates that the nursing staff's attitudes toward patients can be more potent factors in patients' in-hospital improvement than conventional indicators of prognosis.

Other studies which have related hospital environment to outcome seem to provide further evidence as to the importance of relationships with the nursing staff to patients' clinical course and to patients' sensitivity to the staff's attitude toward them. Linn (1970a; 1970b) concluded that discharge rates were not related to patient variables, quality of living conditions on the wards, or hospital rules and policies. Rather, discharge rates were higher in smaller hospitals with more visitors, a higher staff:patient ratio, greater staff involvement, and more patient-staff interaction. Spiegel and Younger (1972) found that a higher rate of elopement was related to lower staff concern for patients and lower ward morale. They also found that when staff saw themselves as more concerned for patients than did patients, patients

were more apt to press for quick release and were less apt to return.

Research on patients' perceptions of their hospital experience corroborates from a subjective perspective the significance of the nursing staff to patients. Leonard (1973) asked patients, most of whom had been discharged, to rate 12 treatment modalities as to their helpfulness during hospitalization. The patients rated interaction with the nursing staff as the second most helpful treatment modality (being in a new environment was rated first) and as more helpful than individual therapy which was rated fourth. Kotin and Schur (1969) developed a questionnaire for assessing discharged patients' attitudes toward their hospital experiences. The patients considered talking with the nurses and attendants to be as helpful as talking to the doctors. Keith-Spiegel and Spiegel (1967) asked patients upon discharge to decide which of the following groups had helped them the most and which had helped them the least: (a) psychiatrists and psychologists, (b) nurses, (c) nursing assistants (aides), and (d) other patients. They found that the higher the educational level of the patient, the more psychiatrists and psychologists were viewed as most helpful and the lower the educational level of the patient the more help was seen as having been given by aides and fellow patients.

Chastko, Glick, Gould, and Hargreaves' (1971) research on patients' post-hospital evaluations of psychiatric nursing treatment indicates some reasons for the perceived helpfulness of the nursing staff. As part of their study, they asked patients to describe particular ways in which nursing staff had been helpful or not. The patients' responses were categorized as follows: (a) available, accessible, and to have

someone to talk to at times when something was bothering them, (b) accepting, nice, pleasant, and friendly, (c) encouraged to do things, (d) helped to understand self better, and (e) criticisms--overly analytical, judgmental, critical, and indifferent.

Hargreaves and Runyon (1969) explored the dimensions along which patients differentiated the nursing staff. The 11 patients who had been on their 26-bed ward long enough to know all the staff filled out the Gough Adjective Checklist (Gough, 1960) for each of 18 nursing staff (ten R.N.s and eight attendants). The checklist contains 300 adjectives which can be used to describe a person. On each adjective, therefore, each nurse could receive zero to eleven checks. Each nurse's standardized score on each of the adjectives was computed. These standardized profiles were intercorrelated, providing a measure of similarity between each pair of staff members. A factor analysis of these intercorrelations was performed. Two factors were identified as underlying patients' ratings of staff: (a) Factor I, a dimension of "warmth" (warm and close vs. cold and aloof), and (b) Factor II, a dimension of "strength" (confident and assertive vs. tentative and permissive).

Tyler and Simmons (1964) investigated patients' conceptions of their mental health workers. They sought to identify the categories used by patients to conceptualize these workers. A modification of Kelly's Role Construct Repertory Test was used for this purpose. The roles investigated were: ward physician, favorite ward nurse, their psychologist, their favorite activity therapist, their social worker, and their favorite psychiatric aide. These roles were presented to the patient in groups of three and the patient was asked to select the two

who were alike and to indicate in what way those two people were alike and how the third person differed from them. All possible combinations of the six types of mental health workers were presented. The categories used by patients to classify the staff as alike or different were: self-references (e.g., "He's helpful to me."), personal characteristics, evaluated task, task, physical characteristics, amount of contact, and unclassified. The preponderance of reasons given for similarities or differences fell into three of the categories, personal characteristics (53%), task of personnel (17%), and self-references (12%). In comparison to the other disciplines, psychologists, nurses, psychiatric aides, and activity therapists were responded to at above expected level "as persons."

In summary, research based on both "objective" and "subjective" evaluations of psychiatric hospitalizations indicate the importance of the nursing staff to patients. Outcome research has found that nursing staff-patient relationships can have a significant effect on patients' hospital course; significant dimensions of these relationships seem to include: staff attitudes (liking, optimism, and anger) toward patients (Shader et al., 1967), staff involvement (Linn, 1970a, 1970b), staff concern (Spiegel & Younger, 1972) and patient-staff interaction (Linn, 1970a, 1970b). Research on patients' perceptions of the nursing staff corroborates the salience to patients of the "personal" aspects of their relationships to nursing staff members while indicating that patients also differentiate between staff members on the basis of the task aspects of the nursing role (Chastko et al., 1971; Tyler & Simmons, 1964).

Previous A-B research seems to suggest that nursing staff members'

A-B status may be related to significant aspects of their relationships with patients. The analogue research reviewed earlier seems to indicate that nursing staff members' A-B status can affect their attitudes toward patients. Differential liking for various types of helpees was found to be related to the A-B status of therapists (Stoler, 1966) and police officers (Lynch, 1974); similarly, several affective dimensions (e.g., coldness-distance, warmth-friendliness) were found to differentiate between A and B attendants' reactions to low versus high social competence schizophrenics (Trattner & Howard, 1970). Clinical research on the A-B variable provides evidence that at least in terms of the therapist role, A-B status seems to be related to differences in role performance. In their retrospective analyses of case records, Whitehorn and Betz (1954, 1957) found that therapists' A-B status was related to several categories of therapeutic approach to schizophrenic patients: A therapists as compared to Bs' were more likely to develop trusting, confidential relationships with schizophrenic patients, to formulate patients' problems in motivational terms, to select "personality-oriented" treatment goals, and to become more actively and personally involved with patients. Segal's (1971, 1972) examination of the actual in-therapy behavior of A and B therapists with neurotic outpatients seemed to corroborate that As' therapeutic approach is more active and personal than is that of Bs'. It should be noted that both Whitehorn and Betz's and Segal's patient samples were comprised predominantly of middle class patients. The apparent personological similarity of A and B individuals across differences in vocational training/commitment and demographic characteristics (Berzins et al., 1972) suggests that A and B nursing staff mem-

bers may also differ in their role performance and along similar lines as do A and B therapists. For example, A nursing staff members may tend to become more involved with at least middle class patients than do Bs. The present research examines the effect of nursing staff members' A-B status on their role performance by assessing patients' perceptions of these staff members.

Perceptions of Therapeutic Relationships from the Perspectives of Patients, Therapists, and Independent Judges

Previous research on perceptions of the therapeutic relationship from the vantage points of patients, therapists, and independent judges has suggested that patient perceptions bear a stronger relationship to outcome than do those of other observers. Barrett-Lennard (1962) postulated that the client's experience of her/his therapist's response is the primary locus of therapeutic influence in the relationship. From this assumption, he predicted that the therapy relationship as experienced by the client (rather than by the therapist) will be most crucially related to the outcome of therapy. Although Barrett-Lennard did not contend that a client's conscious perceptions would represent with complete accuracy the way s/he experienced her/his therapist, he suggested that a client's own report (given suitable conditions) would be the best evidence obtainable of her/his actual experience. He proposed that the client's perceptions of the therapy relationship resulted from the interaction of her/his own personality characteristics and attributes of the therapist's actual experience in rela-

tion to her/him.

He developed a questionnaire instrument, known as the Barrett-Lennard Relationship Inventory (BLRI), to measure five dimensions of interpersonal response. These variables were derived from client-centered theory (Rogers, 1951). The variables measured by the BLRI are: (a) empathic understanding, (b) level of regard, (c) unconditionality of regard, (d) congruence, and (e) willingness to be known. The BLRI was administered to therapists and clients after the fifth session of outpatient therapy (and after the 15th and 23rd sessions if the client continued in treatment). The clients were in treatment at the University of Chicago's Counseling Center.

Change during therapy was assessed by measures given to therapists and clients. Therapists were asked to rate the client's general adjustment level after the first interview and at termination. At termination, therapists were also asked to rate the client's degree of change "as a person." Clients were administered the Q-Adjustment Scale (Diamond, 1954) and the MMPI pre- and post-therapy. Two scales were used from the MMPI, the Taylor Manifest Anxiety (MA) scale and the Depression (D) scale.

He found little linear correspondence between the way that clients view their therapists and therapists' view of themselves, after five sessions. He examined the association of the relationship measures after five interviews with therapy outcome. The fifth session relationship measures were selected to test his hypothesis that relationship dimensions are causal factors in therapeutic change because later in therapy, clients' perceptions may be influenced by their degree of

change. He found that the association between measured relationship and change was stronger when the client's perceptions of the relationship were employed than when the therapist's perceptions were used, even when the criterion of change was also derived from the therapist's judgments. Based upon these results, he concluded, "This appears to be particularly compelling evidence of the primary relevance to therapeutic change of the client's perception of the relationship rather than the therapist's actual experience" (p. 15).

Rogers, Gendlin, Kiesler, and Truax (1967) examined the therapeutic relationship and its impact with schizophrenic inpatients. Schizophrenic patients at a state hospital were seen in individual therapy. The therapeutic relationship was assessed from the vantage points of the patients, therapists, and independent judges. The BLRI was used to assess the patients' and therapists' perceptions of these relationships. Rogers found that the therapeutic relationship, after some initial fluctuation, had a fairly stable quality by the eighth session (patients often had several therapy sessions a week) and remained relatively constant throughout therapy. His schizophrenic patients seemed to perceive primarily the levels of warm acceptance (positive regard) and genuineness of the therapist whereas neurotic patients in previous research (Barrett-Lennard, 1962) appeared to perceive primarily the understanding and genuineness of the therapist. Rogers et al. contended that this differential perception reflects differences between schizophrenics' and neurotics' central focus in therapy, schizophrenics being seen to have relationship-formation as their focus and neurotics' self-exploration. The schizophrenic was viewed as seeking a relationship s/he could trust

and, thus, to be concerned with the therapist's potential as a trustworthy, caring person. Rogers et al.'s findings seem to corroborate Whitehorn and Betz's (1954, 1957) contention that the experience of a trusting, confidential relationship with the therapist is crucial for effective therapy with schizophrenics. Rogers' unbiased raters and schizophrenics tended to make similar evaluations of the therapeutic relationship whereas therapists evaluated the relationship in ways so discrepant from the other two groups as to be negatively associated. The therapist's ratings of her/his own relationship tended to correlate negatively with the index of process in her/his client, and with the therapy outcome, while the assessments by raters and patients tended to correlate positively with both process levels and outcome. Rogers et al. concluded that relationship conditions are effective in producing therapeutic movement only if they are perceived by the patient.

Studies of different approaches to the measurement of empathy provide further evidence that it is the patient's perception of the therapy relationship which mediates its effect on treatment outcome. Kurtz and Grummon (1972) compared measures of empathy for patients, therapists, and independent raters. They used six different measures of therapist empathy. Four of the measures were completed by the therapist: (a) a situational measure, (b) two predictive measures, and (c) a perceived empathy measure. Situational measures employ a standardized test situation (like videotapes) to elicit the therapist's responses. Empathy is treated as a trait in the sense that therapists scoring high in the test situation are presumed capable of greater empathy with their patients. Predictive measures ask the therapist to predict how her/his

patient will respond on a personality inventory or other series of self-descriptive items. At the end of the third session of therapy, the therapist was asked to rate her/his degree of empathy on the BLRI. At the end of the third and final sessions, the patient was asked to rate the therapist's empathy on the BLRI. Independent judges also rated the level of therapist empathy from tapes of the third session. Several measures of outcome were included in this study: (a) Tennessee Self-Concept Scale (Fitts, 1965), (b) MMPI, (c) therapist's judgment of improvement, and (d) patient's judgment of how helpful counseling had been.

Kurtz and Brummon found a highly significant correlation ( $.66, p < .001$ ) between patient's perceived empathy after the third and final interviews. With the possible exception of patient-perceived and tape-judged empathy the other empathy measures were unrelated to each other. (The correlation between patient-perceived and tape-judged empathy was  $.47, p < .10$ .) Patient-perceived empathy after the third session showed strong and mostly significant relationships with several outcome measures. Tape-judged empathy showed positive correlations with all of the outcome measures, but only one correlation was significant. The four empathy measures completed by therapists were unrelated to outcome.

Feitel (1968) also compared different approaches to the measurement of empathy. She found that the patient's rating of feeling understood correlated more highly with outcome than did objective measures of empathy. Thus her results are congruent with those of Kurtz and Grummon.

Sapolsky (1965) postulated that patient-therapist compatibility in the interpersonal need areas measured by FIRO-B (Shutz, 1958) would play an important role in shaping the relationship which developed between

them. He further postulated that these relationship differences would be related to outcome. The patients were female inpatients in individual therapy. The patients were asked to rate a semantic differential according to three instructional sets: (a) fill it out for yourself, (b) fill it out the way your doctor would fill it out for himself, and (c) fill it out the way your doctor would fill it out for you. The Semantic Differential was administered four weeks after admission and two weeks before discharge. The semantic differential involved the patient's rating 11 concepts (e.g., Mother, Father, Me) on scales tapping evaluative, potency, and activity factors. The three instructional sets yielded three combinations from which difference scores (D) were obtained; difference scores were computed, for each combination, in each of the three Semantic Differential factors. These combinations were: (a) the difference between the patient's rating of self and the patient's rating of her doctor (the smaller the D, the more the experienced similarity in relation to the rated concepts), (b) the difference between the patient's ratings of her doctor and the patient's ratings of the way she thought the doctor saw her (the smaller the D, the more similar she felt the doctor experienced them to be in terms of the rated concepts), and (c) the difference between the patient's rating of self and the patient's rating of the way she thought the doctor saw her (the smaller the D, the more understanding the patient felt the doctor had of her). The doctors were also administered the Semantic Differential with a comparable instructional set. The outcome measure was judged improvement by the supervising psychiatrist.

Sapolsky found that patient-therapist FIRO-B compatibility scores

and supervisors' ratings of patient improvement were significantly related (.45,  $p < .05$ ). The compatibility factor was found to be unrelated to the manner in which the patient or therapist perceived each other during the first month of hospitalization. At discharge, however, two of the three patient D scores in the evaluative factor showed statistically significant correlations with compatibility at the .05 level. The more compatibility between the patient and the doctor, the more such a patient would feel that: (a) she was being understood by her doctor, and (b) a similarity existed between herself and her doctor. In regard to outcome, the greatest improvement was seen in patients who experienced themselves as similar to their doctors. There was also a trend for doctors to see themselves as most similar to their most improved patients.

Thus, research on perceptions of the therapeutic relationship from the perspectives of patients, therapists, and independent judges seems to validate the contention that patients' perceptions of the therapeutic relationship mediate its effects on outcome. In the research discussed above (Barrett-Lennard, 1962; Feitel, 1969; Kurtz & Grummon, 1972; Rogers et al., 1967; Saplosky, 1965), patients' perceptions of the therapy relationship were found to be significantly, and often strongly, related to outcome. This same research indicated that patients' perceptions of the therapy relationship are more strongly related to outcome than are therapists' or independent judges' perceptions. Therapists' perceptions have generally been found to be unrelated to outcome. The results of these studies find further support in Strupp and Bergin's (1969) influential review of patient, therapist, and treatment variables in psycho-

therapy. They state, "The patient's perception or experience of the . . . therapy relationship seems more highly correlated with outcome than do 'objective' ratings by an outside observer" (p. 51). (They include therapists when they refer to outside observers.)

Research on patients' and therapists' perceptions of the therapeutic relationship also suggests that patients may be more sensitive to patient-therapist compatibility than are therapists (Sapolsky, 1965). Patient-therapist compatibility as measured by the FIRO-B was significantly related to the patient's feeling understood and similar to the therapist at discharge, while this compatibility was not significantly related to the therapists' ratings.

Patients' perceptions of relationship conditions seem to crystallize and stabilize early in therapy. Kurtz and Grummon (1972) correlated relationship measures from the third session with those from the final session, Barrett-Lennard (1962) correlated fifth session measures with those from later sessions, and Rogers et al. (1967) correlated eighth session measures with those from later sessions, all finding strong positive correlations between relationship measures taken early and late in the therapy process. Patients, however, may require longer exposure to their therapists before their perceptions of the therapists' attitudes solidify. Patients' Semantic Differential ratings were significantly related to patient-therapist compatibility at the time of discharge but not at the end of the fourth week of therapy (Sapolsky, 1965). The Semantic Differential ratings involved the patients' predicting how their therapists would rate a number of concepts. Becoming familiar with a therapist's attitudes would seem to require more contact

with the therapist than would assessing one's own experience of the therapy relationship.

Although the research reported above on patients', therapists', and independent judges' perceptions was limited to the therapeutic relationship, the results of this research seem generalizable to other helping relationships. It does not seem reasonable that the primary locus of influence would differ between the therapeutic relationship and other helping relationships. Thus, if the patient's experience of the therapeutic relationship mediates its effect on treatment outcome, the patient's experience of other helping relationships should also mediate their clinical effects.

Extrapolating the results of the above research to the A-B variable suggests that if the effects of the A-B variable are mediated by the quality of helping relationships, then patients should perceive differences between the relationships offered by A-B helpers. Whitehorn and Betz (1954, 1957) contended that the differential effectiveness of A and B therapists with schizophrenics was mediated by the quality of the relationships they offered to such patients. Their retrospective analysis of case records indicated that in comparison with B therapists, A therapists were more "actively, personally involved" with schizophrenic patients and developed more trusting, confidential relationships with them. Segal (1971, 1972) found that A and B therapists also differed in the therapeutic relationships they offered to neurotics, As' and Bs' styles resembling Whitehorn and Betz's "active, personal participation" and "passive permissive" approaches, respectively. Beutler et al. (1972) reported that A therapists with schizophrenics and B therapists

with neurotics demonstrated more empathy than each did with the other type of patient. Analogue research with other helpers has also provided evidence that helper A-B status affects the quality of the relationships they offer to helpees. A-B attendants were found to differ in their styles of communication with low- versus high-social competence schizophrenics (Trattner & Howard) and A-B police officers differed in their liking for ghetto citizens (Lynch, 1974). The latter study also found that ghetto citizens differed in their perceptions of A-B police officers, rating B police officers as more likeable and trustworthy. The one clinical study, however, which has examined therapists' and patients' perceptions of differential therapeutic pairings (A vs. B therapists with neurotic vs. schizophrenics patients) failed to find differences between the participants' perceptions of these relationships (Bednar, 1970). Bednar's research, reviewed earlier, was not considered a fair test of the hypothesis that participants can perceive differences between the relationships of A and B therapists. It was contended that his A therapists may not have been "true As." His therapist selection procedures seemed likely to include a substantial proportion of women in his A group. It was pointed out that the A-B scales have not been shown to be valid for women (Stephens et al., 1975). His failure to report subscale as well as composite scores for the Relationship Questionnaire and to report results by patient sex and social class were also seen to obscure possibly significant results. Previous research on patient perceptions of the therapy relationship seems to raise further questions in regard to his results.

In the present research, it was decided to examine the A-B vari-

able's effects on nursing staff-patient relationships from the patient's perspective because the patient's experience of helping relationships seems to mediate their effects on therapeutic movement. Thus differentiations made by patients between A-B nursing staff members would seem to have more clinical significance than would differentiations made by other observers.

## C H A P T E R   I I I

## STATEMENT OF PROBLEM

The present research has as its aim to extend the investigation of the A-B variable's relevance to helping relationships beyond the therapist-patient relationship. Previous clinical research on the A-B variable has been limited to the therapist-patient relationship whereas analogue strategies have been used to examine the relevance of the A-B variable to other helping relationships. While the A-B status of other helpers has been found to have significant effects on their interactions with various types of helpees in experimental situations, the effect of these helpers' A-B status on their actual role performance has not been studied. The present research examines the effects of nursing staff members' A-B status on their relationships with patients in the context of their actual work roles. Patients' perceptions of their relationships with nursing staff members were used to assess the A-B variable's relevance to these relationships.

The patients studied in the present research are inpatients at a state hospital. Within this sample, the effect of several patient variables on their perceptions of A-B nursing staff members is examined: diagnosis, sex, social class, and chronicity. These patient variables were included in the present research in an attempt to clarify the bases of A-B related helper-helpee compatibility. Although previous research has suggested that patient sex and social class are bases of differential compatibility with A and B helpers, the present research is the first study to include statistical analyses of their effects. The ef-

fect of patients' chronicity on their relationships with A-B helpers has not been studied in the previous research. Since severity of illness as measured by patients' prognosis (process vs. nonprocess) and diagnosis (neurotic vs. schizophrenic) have been shown to have significant interactions with helper A-B status (e.g., Whitehorn & Betz, 1954), it seemed that chronicity, another index of severity of illness, might also affect compatibility with A-B helpers.

The present research also aims to extend the investigation of the A-B variable's relevance to female helpers. Most of the previous research on the performance correlates of A-B status have used all male helper samples; no study has used an all female sample, and of those studies using data from both female and male helpers, only one study has analyzed the data for the two sexes separately (Stephens et al., 1975). As mentioned earlier, Stephens et al. found that for the 11 female therapists in Whitehorn and Betz's therapist samples, there was no relationship ( $r = -.02$ ) between their A-B scores and their patient improvement rates. However, research on the personality correlates of A and B status found that these correlates were highly similar in samples of males and females (Berzins et al., 1972). This finding led Berzins et al. to suggest that female As and Bs could be expected to perform comparably to male As and Bs on personality grounds. The small number of female therapists in Whitehorn and Betz's therapist samples in conjunction with the seeming consistency of the personality correlates of A-B status across the sexes seems to indicate that further investigation of the performance correlates of A-B scores in females is warranted. The present research includes separate analyses of the data for female and male nurs-

ing staff members to assess further the applicability of the A-B scale to females.

As well as investigating patients' perceptions of their relationships with A-B nursing staff members, the present research also examines whether patients can perceive differences between A-B nursing staff members in the terms of the scale itself. Patients were asked to complete an A-B scale for the male staff members on their ward who had the highest and lowest A-B scores; patients were instructed to fill out the A-B scale as they thought the staff member would fill it out for himself. This part of the research was limited to male staff because it would have been too time-consuming to have patients fill out four A-B forms (i.e., one each for the highest male and female and lowest male and female). Since the patients tended to have short attention spans, most patients would have needed an additional interview session to complete A-B forms for female staff as well. Male staff were selected rather than female staff because the relevance of the A-B variable for females has not been established.

## CHAPTER IV

## METHOD

Setting

Westboro State Hospital has a census of approximately 450 patients who are treated in four units, three catchment area units and a medical unit. The geographic areas served by the catchment area units are: Greater Framingham, Cambridge-Somerville, and Marlboro-Westboro. The catchment area units are quite autonomous from one another and function almost like separate hospitals. The units do have some administrative ties to one another and do participate together in some teaching programs. Each catchment area unit is housed in its own building as is the medical unit.

The patient population of Westboro State Hospital consists basically of three subpopulations, acute, chronic refractory, and long-term chronic patients. The term "acute" is used to designate those patients whose hospitalizable usually psychotic symptoms occur in the context of a relatively adequate adjustment. Their admission to Westboro is often their first or another early psychiatric hospitalization. They frequently recompensate quite rapidly and are able to resume their previous adequate adjustment when they return to the community. The term "chronic refractory" is used to designate those patients who have needed hospitalization intermittently over a number of years and whose level of functioning in the community is quite minimal in terms of the demands of everyday life. These patients usually are unable to hold a job and are

supported through public assistance programs. Their typical pattern is to live much of the year in the community but to periodically experience an exacerbation of their symptoms and require hospitalization. Rehospitalization serves to reduce their symptoms but even after their symptoms have decreased their adjustment remains quite impaired. Acute and chronic refractory patients comprise a small percentage (perhaps 20%) of the patient population at Westboro State Hospital; most of the patients are long-term chronic patients.

Westboro State Hospital like most other state hospitals has made a major effort to reduce its patient census in recent years. In the past few years, its census has dropped by several hundred patients. This drop in census was achieved primarily by placing higher level long-term patients in community residences or nursing homes. Thus most of the long-term patients still in the hospital are very regressed. They are generally very out of contact with reality and many are nonverbal or incoherent. There is still, however, a small proportion of long-term patients who function at a substantially higher level; their mental status often seems similar to that of chronic refractory patients but they have not been able to adjust to community life.

In terms of diagnosis, the vast majority of patients who are admitted to Westboro State Hospital are psychotic, predominantly schizophrenic. The nonpsychotic patients usually have severe character pathology such as borderline or schizoid characters. The social class backgrounds of the patients range from lower to middle class, with the majority of the patients coming from lower class backgrounds. Middle class patients are hospitalized at Westboro often because their medical insurance has

been exhausted by previous hospitalizations. Middle class patients may also be hospitalized at Westboro when their admission is on an involuntary basis.

The patient populations of the three catchment area units vary in size but tend to be similar in terms of demographic and clinical characteristics. On all of the units, the ward populations consists of a mixture of more recently admitted and long-term patients. This distribution of patients results from both practical and clinical considerations. Because of the very large population of long-term chronic patients, to have a ward exclusively for short-term patients would require overpopulating other wards or creating additional wards. To open additional wards would increase the hospital's operating costs and is, therefore, not feasible within the hospital's limited budget. Mixing higher-level and long-term chronic patients is also justified on the grounds that it is detrimental to staff morale to treat just long-term chronic patients and that these long-term patients profit from contact with less impaired patients. Because the catchment area units vary in patient population size, they also differ in number of wards. The Marlboro-Westboro unit has an average patient population of 35 and one ward, the Greater Framingham unit an average of 65 patients and two wards, and the Cambridge-Somerville unit an average census of 135 and five wards.

The medical unit's patient population differs from that of the catchment area units. Its population of 200 patients consists largely of long-term, very regressed patients who are chronically physically as well as psychologically disabled. This unit also provides more acute medical care for other members of the hospital's patient population who

have illnesses or injuries that cannot be adequately treated on the psychiatric units.

The treatment orientation at Westboro for the acute and chronic refractory patients is to provide relatively short-term care. The usual goals of treatment are to enable a patient to live in the community and to participate in outpatient treatment programs. The treatment modalities used to achieve these goals usually include chemotherapy, supportive therapy, and environmental manipulation (e.g., helping a patient to find a new place to live or obtain social security disability assistance). Few patients at Westboro receive traditional psychotherapy, that is, a long-term relationship in which insight and personality change are major goals. Although Westboro's treatment program tends to have limited goals, the average length of stay is one month and it is not uncommon for a patient to stay for several months. Many of the patients are severely disturbed and are slow to recompensate. Also, they may need to gain further independent living skills before they can live outside of the hospital. In addition, when a patient's previous living situation is deemed unsatisfactory, arranging for a new situation (e.g., halfway house or co-op apartment) can be a time-consuming process.

Each catchment area ward at Westboro State Hospital has a staff which includes a full- or part-time physician, about two other mental health professionals (psychologists and/or social workers), and nursing personnel. There are three shifts a day of nursing staff; the day shift works from 7 A.M. to 3:30 P.M., the evening shift from 2:30 P.M. to 11 P.M., and the night shift from 11 P.M. to 7:30 A.M. The nursing staff has permanent rather than rotating shifts. To clarify the staff-

ing pattern at Westboro, the staff composition of one of the wards on the Greater Framingham unit will be described (the investigator worked as a psychologist on this unit for 3-1/2 years). This ward, 3b, has an average patient census of 35, about ten of whom are more recent admissions and the rest long-term patients. A psychiatrist is assigned full-time to this ward as are a social worker (an M.S.W.) and an assistant psychologist (a graduate student in a master's program in counseling). On the day shift, the head nurse who is an R.N. and about 5-6 other nursing staff members (L.P.N.s and attendants) are on duty a day. On the evening shift, the size of the nursing staff is about the same as it is during the day. At night, the nursing personnel consists of only 2-3 staff members. The staffing patterns are similar for the Greater Framingham and Marlboro-Westboro units. Because of its much larger patient population, the Cambridge-Somerville unit has a smaller staff:patient ratio than the other two units.

Role definition at Westboro seems to be affected by two implicit models of treatment, a medical model and a psychosocial one. The nursing staff and older physicians tend to adhere to the former model while social workers, psychologists, and new physicians tend to prefer the latter. Many of the nursing staff at Westboro have held their jobs for many years and plan to make this job their career. They generally live in the small towns which are close to the hospital. The older physicians have usually worked at a state hospital for many years, are often foreign-born and -trained, and may not have had formal training in psychiatry. They also tend to be residents of local towns. The nursing staff and these physicians tend to define staff responsibilities along

traditional lines with each discipline having distinct responsibilities. For example, nursing staff tend to define their roles in terms of ward maintenance and the physical care and control of patients. The social workers, psychologists, and newer physicians (almost all of whom are psychiatrists) seem to view their jobs at Westboro as a transitional phase in their careers. Westboro is viewed by them as a place to work until they have finished their graduate education or have gained enough experience to move on. Many of these professionals reside in the Boston area. They tend to prefer a less hierarchical staff structure with more sharing of responsibility among the different disciplines. They define the nursing staff's appropriate role in more psychotherapeutic terms and try to involve nursing staff more in the formulation and implementation of patient treatment plans.

Soon after admission all patients are assigned to a case coordinator. A case coordinator is the mental health worker who has primary responsibility for a patient's treatment while at Westboro. The case coordinator role is similar to the traditional role of a psychiatric resident. The case coordinator gathers a case history, identifies a patient's problems, and formulates and implements a treatment plan.

The catchment area units differ somewhat in regard to the disciplines of the case coordinators. On the Greater Framingham and Marlboro-Westboro units, case coordinators are mental health professionals, usually social workers or psychologists. On the Cambridge-Somerville unit, some nonprofessional mental health workers (L.P.N.s and attendants) are also case coordinators. These nonprofessionals function as case coordinators on a voluntary basis and do so in addition to nursing

responsibilities. Although all three catchment area units have attempted to interest the nursing staff in the case coordinator role, only the Cambridge-Somerville unit has been successful in its attempt. The Cambridge-Somerville unit's success may be due, in part, to its smaller clinical staff:patient ratio and its consequent greater need for the nursing staff to function in this role. Also, since it is affiliated with Cambridge Hospital where the nursing staff regularly functions in this role, the Cambridge-Somerville unit may have a stronger ideological commitment to having nonprofessional case coordinators.

On the one Marlboro-Westboro ward and on three of the Cambridge-Somerville wards, patients are assigned to nursing evaluators as well as to case coordinators. The nursing evaluator role is not well-defined but seems to involve getting to know assigned patients, being available to them, helping to implement their treatment plans, and providing information about their ward behavior to case coordinators. All levels of nursing staff function as case coordinators. Unlike the case coordinator role, the nursing evaluator role is a required rather than a voluntary role for the nursing staff. However, although the nursing staff are required to be assigned as nursing evaluators to patients, their performance of this role is not closely monitored. The nursing evaluator role, thus, often becomes a nominal role seemingly because of the nursing staff's resistance to defining their roles in psychotherapeutic terms.

Although the possible range of roles for the nursing staff at Westboro is wide, most staff members seem to limit their roles to traditional nursing responsibilities. The nursing staff usually have speci-

fic daily assignments in regard to ward maintenance and the physical care of patients and if R.N.s or L.P.N.s in regard to medication as well. These assignments still seem to leave much of the nursing staff's work day unstructured. Beyond these assignments, few additional nursing demands are placed on the staff so that each staff member has considerable leeway in structuring her/his work hours. Nursing staff members seem to fill up their work day by taking on additional custodial tasks, engaging in social contact with patients, and socializing with each other. There seem to be variations between staff members in terms of the relative amounts of time they spend in each of these activities.

### Subjects

#### Nursing Staff

The subjects included 83 members of the nursing staff at Westboro State Hospital. The subjects were recruited from six wards, the two Greater Framingham, the one Marlboro-Westboro ward, and three of the five Cambridge-Somerville wards.<sup>1</sup> The day and evening shifts were approached to participate in the present research. The night shift was excluded because during their work hours (11:00 P.M. to 7:30 A.M.), the patients are usually asleep and thus, this shift has little patient contact. All levels of nursing staff (R.N.s, L.P.N.s, and attendants) were included in the present research. The 83 subjects in the present sample

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<sup>1</sup>The head nurse on one ward refused permission to have this research conducted on her ward. Another ward was eliminated because none of its patients met the criteria for inclusion in this study (see below for criteria).

comprise 76% of the day and evening nursing personnel on the wards studied. The predominant reasons for refusing to participate were: (a) fear of what the present researcher might "find out" about the staff member from her/his responses to the A-B scale, and (b) fear that hospital administrators might learn of their responses and that this information could somehow threaten their jobs. Table 1 presents the distribution of the participating nursing staff by unit and by ward. The number of nursing staff in Table 1 totals to 85 because one attendant worked half-time on two wards and another attendant was transferred from one ward to another midway through the data collection.

To control for variables that might obfuscate the relationship between A-B status and patient ratings, information on demographic characteristics was obtained from participating nursing staff members. This information included the following: sex, age, position (R.N., L.P.N., attendant), length of employment at Westboro, and length of employment in nursing. Previous research has suggested that helpers' sex and age may be related to their A-B status. Females have been found to score more in the A-direction than do males (Lorr & McNair, 1966; Berzins et al., 1972) and the likelihood of scoring in the B-direction may increase with age (Heaton et al., 1975). Since A and B interest patterns have been seen to have some correspondence with those of middle versus working class people, respectively (McNair et al., 1962), it seemed as if the level of a staff member's position (i.e., R.N., L.P.N., or attendant) might be related to her/his A-B score. Length of employment at Westboro was included because it seemed that people who make their jobs at a state hospital their careers may differ in their personality character-

TABLE 1

Distribution of Nursing Staff and Patients by Unit and Ward

Unit	Ward	Nurse	Patients
Greater Framingham	1	19	8
	2	16	8
Marlboro-Westboro	1	15	13
Cambridge-Somerville	1	12	4
	2	12	7
	3	11	9
Total		85	49

istics from those who work in the state system for a few years and then leave for other jobs. This rationale also led to the inclusion of length of employment in nursing since a substantial number of the staff worked at state hospitals which closed down before coming to Westboro. The characteristics of the nursing staff who participated in the present research are summarized in Table 2.

### Patients

The subjects consisted of 49 patients hospitalized on six wards at Westboro State Hospital. Table 1 presents the distribution of these subjects by unit and ward. Criteria for inclusion in the present research were that the patient: (a) be in sufficient contact with reality to give meaningful responses, (b) not have diagnoses of mental deficiency or organic pathology, and (c) be hospitalized at least two weeks unless s/he had had recent previous admission to Westboro (less than two weeks was not considered sufficient time to become familiar with the staff). The sample of patients who satisfied these criteria are quite heterogeneous in regard to their demographic and clinical characteristics. The patients vary a great deal in terms of chronicity with the sample comprised of patients from the three clinical populations described above, i.e., the acute, chronic refractory, and longterm chronic populations. Because of the small proportion of patients at Westboro who were in sufficient contact to participate in this research and the limited time available for data collection, it was not possible to select a more homogeneous patient sample. Information on demographic and clinical characteristics of the patients in the sample was obtained in

TABLE 2  
 Characteristics of Nursing Staff (N = 83)

Characteristics	N
Sex	
Male	33
Female	50
Age	
20-29	31
30-39	14
40-49	18
50-59	17
60+	3
Position	
R.N.	6
L.P.N.	26
Attendant	53
Length of employment at Westboro	
Up to 6 months	9
>6 months-1 year	11
>1 year-2 years	7
>2 years-5 years	15
>5 years-10 years	20
>10 years-20 years	17
>20 years	6
Length of employment in nursing	
Up to 6 months	6
>6 months-1 year	8
>1 year-2 years	6
>2 years-5 years	15
>5 years-10 years	12
>10 years-20 years	20
>20 years	18

order to assess the effect of these characteristics on their ratings of A-B nursing personnel. This information included: patient's sex, age, marital status, education, occupation, father's occupation, diagnosis, length of current admission, history of psychiatric hospitalization. The characteristics of the patients in the present research are presented in Table 3. (Because only four of the 49 patients had worked within the last two years, patients' occupational level is not included in Table 3.)

### Measures

#### A-B Scale

The A-B scale recently developed by Stephens, Shaffer, and Zlotowitz (1975) was used in the present research. As discussed previously, this scale has been shown to have superior predictive validity in terms of the original criterion (i.e., the patient improvement percentages of the residents in Whitehorn and Betz's samples) and superior internal consistency reliability as compared to previous A-B scales. The scale consists of 46 Strong Vocational Interest Blank items (Form T399). Its items are scored in terms of a trichotomy (all SVIB items have three response alternatives, e.g., like, indifferent, and dislike). For each item, the response characteristic of A is given a weight of two, the middle response a weight of one, and the opposite response a weight of zero. The possible range of scores on this scale is, therefore, 0 to 92. The higher the score, the more A-like an individual's responses are and conversely, the lower the score, the more B-like the responses. (See Appendix A for copy of A-B Scale.)

TABLE 3  
 Characteristics of Patients (N = 49)

Characteristics	N
Sex	
Male	27
Female	22
Age	
16-19	2
20-29	15
30-39	16
40-49	8
50-59	4
60-69	3
70+	1
Marital Status	
Single	36
Married	3
Separated	1
Divorced	5
Widowed	4
Educational Level	
Up to 8th grade	7
9-11 grades	11
High school graduate	14
Some college	14
College graduate	1
Graduate school	2
Father's occupational level <sup>a</sup>	
I	4
II	6
III	6
IV	6
V	7
VI	14
VII	1
Missing	5
Diagnosis	
Schizophrenia	28
Manic-depressive illness	5
Borderline personality	7
Other personality disorders	5
Alcoholism with depression	4

<sup>a</sup>Ratings based on Warner, Meeker, and Eell's (1960) Revised Scale for Rating Occupations.

TABLE 3 (continued)  
 Characteristics of Patients (N = 49)

Characteristics	N
Percentage of life hospitalized	
1-5%	20
6-10%	7
11-20%	10
21-30%	4
31-54%	4
Missing	4
Length of current hospitalization	
<1 month	13
1 month-< 3 months	14
3 months-< 1 year	11
1 year-< 5 years	6
+5 years	5

### Measure of Chronicity

The percentage of her/his life that a patient has been hospitalized was the measure of chronicity used in the present study. This measure was selected in an attempt to control for patients' current age which ranged widely in the patient sample. Since obviously the older a patient is the more years s/he has had in which to be hospitalized, unless current age was taken into consideration, the chronicity measure would be biased against older patients.

### Social Class Measures

Two measures of a patient's social class were used in the present research, a patient's educational level and her/his father's occupational level. Warner, Meeker, and Eells' (1960) revised Scale for Rating Occupations was used to classify fathers' occupations in terms of social class. Warner et al.'s scale assigns ratings of 1 to 7 to occupations, one indicating the highest social class and seven the lowest. The ratings are based on the degree of skill required for a job and the amount of prestige attached to it. A measure of fathers' social class was included because social-class related interests and values, a suggested basis of differential compatibility with A-B helpers, may be more closely related to a patient's social class of origin than a patient's achieved social class.

### Perceived Relationship Measures

Five-point rating scales of six relationship dimensions were used to assess patients' perceptions of each of the participating members of

their wards' nursing staff. These relationship dimensions were: (a) how easy would it be to talk to her/him about personal thoughts, feelings, and problems; (b) how promptly has s/he filled your requests (e.g., for personal hygiene items, to have the ward door opened); (c) how interested in you has s/he seemed to be; (d) how strict has s/he been in enforcing ward rules and regulations; (e) in general, how talkative has s/he seemed to be; and (f) how pleasant have you found her/him to be. (See Appendix B for copy of relationship measures.) The relationship dimensions were selected on the basis of previous research and pilot interviews with patients which suggested that the dimensions could discriminate between A and B helpers and were salient to patients.

Ease in talking to a staff member about personal matters was derived from Berzins et al.'s (1970) work: As mentioned above, when narcotic addict patients were given "trust" or "distrust" pre-interview sets, A-type aides with "distrusting" (schizoid-like) patients and B-type aides with "trusting" (neurotic-like) patients obtained better patient self-disclosure in "personal" topical areas than did oppositely paired dyads ( $p < .0005$ ). Also, Chastko et al.'s examination of patients' posthospital evaluations of nursing treatment indicated the importance to patients of having someone to talk to at times when something was bothering them. Interest in patient was selected on the basis of Whitehorn and Betz's (1954, 1957) finding that A and B therapists seemed to differ in their degree of personal involvement with schizophrenic patients (with As more involved) and research on hospital environment which indicated that staff involvement with (Linn, 1970a, 1970b) and staff concern for patients (Spiegel & Younger, 1967) are sig-

nificant factors in their treatment outcome. Pleasantness was included as an indicator of the affective quality of patients' relationships with staff members. Lynch (1974) found that A and B police officers were differentiated by ghetto citizens in terms of likeability. Similarly, A and B helpers have been found to differ in their liking for ghetto citizens (Lynch, 1974) and schizophrenics (Stoler, 1966), and to also differ along other affective dimensions (e.g., warmth-friendliness) in their interactions with "good" versus "poor" prognosis schizophrenics (Trattner & Howard, 1966). Likeability was not used in the present research because such a direct statement of preference seemed threatening to both patients and staff. Pleasantness was chosen based on pilot interviews in which patients frequently mentioned that the staff had been pleasant or nice. Chastko et al. (1971) also found that when asked what had been helpful about nursing care, ex-patients often described the staff as "accepting, nice, pleasant, and friendly." Since verbal and interpersonal interests have seemed to characterize A status (Razin, 1971), it seemed that A individuals might be more talkative than were Bs'.

Promptness and enforcement of ward rules and regulations were included to tap the task aspects of the nursing role. Tyler and Simmons (1964) found that while personal characteristics of the staff predominate in patients' conceptions of mental health workers, the task aspects of staff's behavior (i.e., the nature and quality of their work) were also salient. Also, Whitehorn and Betz's (1960) description of A and B therapists' value systems as emphasizing individuality and conformity, respectively, suggested that A and B nursing staff might differ in their degree of enforcement of ward rules and regulations.

### Procedure

Permission to conduct the present research at Westboro State Hospital was obtained by submitting proposals for this research to the hospital's human subjects committee and to each unit's executive committee. Before data collection was initiated on a ward, the head nurse was contacted and her permission obtained. The head nurses on seven of the eight psychiatric wards agreed to have the research conducted on their wards. The present researcher's contact with the one head nurse who refused was limited to telephone conversations because she claimed she did not have the time to meet in person. On the phone she was vague in specifying the reason for her refusal.

The head nurses on the participating wards were asked to provide a list of the staff members on their wards who worked on either the day or evening shifts. Each of these staff members was approached on an individual basis. The purpose of the research and what their participation would entail was explained to them. They were also asked to read an informed consent form (see Appendix C) which explained the research further. If the staff member agreed to participate, s/he was often interviewed at that time or if s/he was not available then, another time was set up. At the time of the interview, data on the demographic variables of interest in this study were obtained (see Appendix D for the form used to record demographic information) and the A-B scale was administered. The average length of the staff interviews was 15 minutes.

After all the staff interviews had been completed on a ward, data collection on the patients was initiated. Each head nurse was asked to

provide a list of those patients on her ward who were in sufficient contact with reality at that time to participate in this research. Patients were not interviewed until they had been at Westboro at least two weeks on their current admission (unless they had recent previous admissions to Westboro). Since the initial lists of suitable patients totaled just to about 20 patients, the patient populations on the various wards were reviewed at weekly intervals with the head nurses. During the two-month period of data collection on patients, quite a few patients who initially had been inappropriate recompensated sufficiently from acute psychotic episodes to participate in the research. However, during the entire period of data collection, none of the patients on one of the wards met the criteria for inclusion in this study. Thus, although data were collected on the nursing staff on seven wards, the data from only six wards could be used in the present research.

Patients were approached on an individual basis to participate in this research. The present researcher often asked members of the nursing staff to introduce her to patients. All but one of the patients who were asked agreed to participate in this research. Patients were asked to read an informed consent form (see Appendix E) which explained the nature of the present research. Patients were interviewed individually. At the time of the interviews, patients were asked to provide the demographic information pertinent to the present investigation; the relevant clinical data were obtained from patients' case records (see Appendix F for the form used to record the demographic and clinical data). Patients were then asked to complete A-B scales for two of the male staff on their ward. (Within a ten-year age range the two staff members

whose A-B scores differed the most were selected for these ratings.) The A-B scales were presented to patients one at a time with a staff member's name printed at the top and they were instructed to fill out the A-B scale as they thought that person would fill it out for himself. Lastly, the patients were asked to rate the staff on the six relationship dimensions. The average length of the patient interviews was about one hour. This was often divided between two sessions because many patients had limited concentration spans. When two sessions were required, the A-B scales were completed at the first session and the relationship ratings at the second.

### Experimental Hypotheses

Since the present research is the first clinical study of the effects of nursing staff's A-B status on their relationships with patients, the hypotheses stated below are considered to be speculative.

### Relationship Ratings

Table 4 presents the dependent variables used in the present research, the six relationship dimensions discussed above, along with the anchors of the high and low points on their five-point scales. Previous research seemed to suggest that these six dimensions might differ in the extent to which they tapped differential compatibility with A-B staff versus general personality differences between As and Bs. The A-B literature seemed to indicate that neither As nor Bs would characteristically be seen as easier to talk to, more interested, and more pleasant

TABLE 4  
Relationship Dimensions

Dimensions	Rating Range	
	High (5)	Low (1)
Easy to talk to	Very easy to talk to	Very difficult to talk to
Prompt	Very promptly	Very slowly
Interested	Very interested in me	Not interested in me at all
Strict	Very lenient	Very strict
Talkative	Very talkative	Very quiet
Pleasant	Very pleasant	Very unpleasant

Note: The relationship dimensions are listed in the order in which they were presented to patients.

across patient types. Berzins et al. (1970) found that while "dis-trusting" (schizoid-like) narcotic addict patients disclosed more in "personal" topics areas to A type aides, "trusting" (neurotic-like) pa-tients disclosed more to B type aides. Berzins et al. also reported that there was no significant main effect for aide A-B status in rela-tion to patient self-disclosure. On post-interview ratings, the nar-cotic addict patients did tend to rate A type aides as more "open" ( $p < .10$ ). However, Lynch (1974), using Berzins et al.'s interview struc-ture, found that ghetto citizens rated B policemen as significantly more likeable than A policemen ( $p < .02$ ). Similarly, A and B helpers have been found to differ in their affective reactions to different kinds of helpees. While B policemen were found to like their ghetto citizen in-terviewees better than did A policemen (Lynch, 1974), A psychiatric residents indicated more liking for schizophrenic patients, especially for "process" schizophrenics, than did B residents (Stoler, 1966). Also A-B attendants were found to differ in their affective reactions to "good" versus "poor" premorbid schizophrenics, As' responding more posi-tively to "poor" and Bs' to "good" premorbid schizophrenics. Thus, on the basis of the above research, it seemed that patients' ratings of A and B nursing staff on the easy to talk to, interested, and pleasant di-mensions should be affected by their differential compatibility with As and Bs as indicated by their demographic and clinical characteristics (specified in Hypotheses 1-6 below).

In comparison to the three relationship dimensions discussed above, the strict, talkative, and prompt dimensions seemed as if they might re-reflect general personality differences between As and Bs to a greater ex-

tent. Thus, it is proposed that there may be A-B main effects in relation to the strict, talkative, and prompt dimensions but not the easy to talk to, interested, and pleasant dimensions. Based upon the SVIB interest patterns and the data on clinical styles Whitehorn and Betz (1960) developed contrasting characterizations of A and B residents. As were seen as having "a problem-solving, not purely regulative or coercive approach" and as valuing "responsible self-determination more. . . than obedience and conformity"; Bs, on the other hand, were seen as "likely to view the [schizophrenic] patient as a wayward mind needing correction" and as emphasizing "value systems weighed more heavily toward deference and conformity to the way things are" (p. 964). Thus extrapolating from the therapist to the nursing role, it seemed that B nursing staff might be stricter in enforcing ward rules and regulations than were As. Based on As' and Bs' differential SVIB interest patterns, verbal-intellectual versus practical-mechanical, respectively, and on posited differences in their social orientations, As affiliative and approaching and Bs more reserved, it seemed that As might be more talkative than were Bs as individuals. The reported differences in As' and Bs' interest patterns mentioned above have led to As' being characterized as "thinkers" and Bs' as "doers" and Bs have been seen as more interested in "reality-oriented" problems and practical difficulties than have As (Heaton et al., 1975). Considering these differences in the context of the nursing role, it seemed that Bs might be more prompt than were As in responding to patients' material needs (e.g., for personal hygiene items).

Although the strict, talkative, and prompt relationship dimensions

are seen to reflect general personality differences between As and Bs, it seems that these dimensions may also reflect differential compatibility with As and Bs. Thus, Bs might express their preference for a patient by being more lenient, and As might express theirs by being more prompt. Also, Bs may talk more to preferred patients, therefore be seen by these patients as more talkative in general. However, it is hypothesized that patients' ratings on the strict, talkative, and prompt dimensions will be less affected by differential compatibility with As versus Bs than will ratings on the easy to talk to, interested, and pleasant dimensions. Thus, in the hypotheses stated below, when patients are predicted to differ in their ratings of As and Bs on the basis of demographic and clinical characteristics, the interaction effects between patient characteristics and A-B status are expected to be of greater magnitude for the easy to talk to, interested, and pleasant dimensions than for the strict, talkative, and prompt dimensions.

#### Patient Characteristics and Differential Compatibility with A and B Nursing Staff

The A-B literature indicates that various demographic and clinical characteristics of patients may be bases of differential compatibility with A and B helpers.

In general, previous A-B research indicates that As are more successful with schizophrenic patients than are Bs. Whitehorn and Betz (1960; Betz, 1962, 1963a, 1963b, 1967) consistently found that A therapists' improvement rates with schizophrenic inpatients were substantially higher than those of B therapists. Similarly, Berzins et al. (1972)

reported that in brief therapy (three sessions average) with college students, As were significantly more effective than Bs in facilitating improvement in presenting problems. In analogue research, Berzins et al. (1970) found that A type attendants elicited more "personal" self-disclosure from "distrusting" (schizoid-like) narcotic addicts than did Bs. Draper (1967), however, reported that Bs had higher discharge rates with schizophrenics than did As in a very short-term inpatient program (five-day average stay). In Draper's study, the decision to discharge a patient to the community was based upon the availability of environmental supports in addition to symptom decrease and increased socialization. Because of the relative independence of the environmental support criterion from current patient behavior, it is not clear that Bs' patients actually showed more clinical improvement. (The discrepancy between Draper's and Whitehorn and Betz's results on inpatient schizophrenics has also been attributed to social class differences between their patient samples. See Hypothesis 5 below.) Based on the general trend of the research presented above, the following is expected:

Hypothesis 1: Schizophrenic patients should rate A nursing staff members higher on the six relationship dimensions than they rate B nursing staff members.

This hypothesis and Hypotheses 2 to 6 below will be tested with the data for male and female As and Bs considered separately and with the data for the two sexes combined. The hypotheses are considered particularly speculative for female As and Bs and for the combined sample because the evidence for the comparability of A and B status in males and females comes from research on the personality correlates (Berzins

et al., 1972) and not the performance correlates of A-B status.

Since all but one of the previous A-B studies on inpatients has been limited to samples of schizophrenics, there is little empirical basis on which to make predictions for the nonschizophrenic patients in the present research. Whitehorn and Betz (1954) in the one study that examined the effects of A and B status on other inpatients, found that As and Bs did not differ in their improvement rates with depressives or neurotics. These results seem consistent with the research on "process" and "nonprocess" schizophrenia. Whitehorn and Betz found that the differential success rates between A and B therapists were even more striking with "process" than "nonprocess" schizophrenics. Thus, it may be that the greater the severity of disorder the greater the differential compatibility of As and Bs.

The majority of the nonschizophrenic patients at Westboro have severe character pathology such as borderline personalities. Thus, the nonschizophrenics at Westboro differ from Whitehorn and Betz's neurotic and depressive samples. However, since the nonschizophrenics are less severely disturbed than the schizophrenics, it is predicted:

Hypothesis 2: Nonschizophrenics should differ less in the ratings of A and B nursing staff on the six relationship dimensions than should schizophrenics.

Chronicity, the recurrence of symptoms and hospitalization, is like the process-nonprocess distinction a measure of severity of illness. Chronicity and the process-nonprocess distinction are related in that process-nonprocess status (typically measured by clinical course or pre-morbid social competence) is a prognostic indicator in schizophrenia and

chronicity is a primary outcome it seeks to predict. Chronicity is also a prognostic indicator in that amount of time previously hospitalized seems to be related to the likelihood of rehospitalization (Erickson, 1975). Extrapolating from the results on process and nonprocess schizophrenics, it is predicted that:

Hypothesis 3: Schizophrenics of high chronicity should rate As higher relative to Bs than should schizophrenics of low chronicity. And more generally,

Hypothesis 4: Patients of high chronicity should rate As higher relative to Bs than should patients of low chronicity.

Sex differences in the composition of the patient samples of different studies have been used to explain inconsistencies in the A-B literature (Heaton et al., 1975). For example, McNair et al. (1962) found that B therapists were more effective than As with a sample of all male, mostly neurotic outpatients while Berzins et al.'s (1972) A therapists were more successful than Bs with a sample of neurotic college students composed of both males and females. Research on interest patterns (Lorr & McNair, 1966), perceptual and cognitive styles (Carson, 1957) and personality characteristics (Berzins et al., 1971) of A and B individuals has suggested that As would have more in common with female patients and Bs with male patients. These similarities have been seen to facilitate the development of effective working relationships. Thus,

Hypothesis 5: Female patients should rate As higher on the six relationship dimensions than they should rate Bs. On the other hand, male patients should rate Bs higher on the six relationship dimensions than they should rate As.

Differences in the social class composition of the patient samples in different studies have also been seen to explain some divergent results in the A-B literature (Heaton et al., 1975). For example, Whitehorn and Betz's findings of As' higher improvement rates than Bs' with schizophrenics (summarized in Betz, 1967) were based on samples of mostly middle class patients, while Draper's (1967) B therapists were more successful than were As with a sample of predominantly lower and lower-middle class schizophrenics. From Bs' greater interest in skilled labor and technical activities as indicated by their characteristics SVIB responses, it has been inferred that Bs may have more similar backgrounds, more similar interests, or may be more familiar with the daily living problems of lower class patients (likewise A therapists with middle class patients) (McNair et al., 1962). These similarities have been seen to facilitate communication and relationship-formation. Therefore,

Hypothesis 6: Higher social class patients should rate As higher on the six relationship dimensions than they should rate Bs. On the other hand, lower social class patients should rate Bs higher on the six relationship dimensions than they should rate As.

The above hypothesis is tested for two measures of social class: a measure of achieved social class, patients' educational level, and a measure of social class of origin, their father's occupational status.

## CHAPTER V

## RESULTS

Distribution of A-B Scores for the Nursing Staff

Table 5 presents the distribution of A-B scores for the total sample of nursing staff, male staff and female staff. The means for male and female staff differ only slightly, with males averaging about a point higher than females. These results contrast with the differences found between males and females in previous research in which male and female therapists (Lorr & McNair, 1966) and male and female college students (Berzins et al., 1972) were found to differ significantly in their mean A-B scores, with females scoring more in the A direction than did males.

Intercorrelations of the Relationship Dimensions

Table 6 presents the intercorrelations of patients' ratings of staff on the six relationship dimensions. Since each staff member was rated by a number of patients (ranging from 4 to 13 among the wards), these intercorrelations are based on each staff member's average rating on each of the six dimensions. The concomitant variation of easy to talk to, prompt, interested, talkative, and pleasant ratings suggests that these dimensions tap a common factor while strict ratings tap a different factor. The dimensions of easy to talk to, prompt, interested, and pleasant also tend to share more variance with each other than

TABLE 5  
Distribution of A-B Scores for the Nursing Staff

Score Range	Staff		
	Male	Female	Total
70+	1	2	3
60-69	17	11	28
50-59	6	24	30
40-49	5	8	13
30-39	4	5	9
Total	30	53	83
Mean	55.6	54.5	56.0
Median	61	56	56

TABLE 6  
Intercorrelations of the Relationship Dimensions  
for the Nursing Staff (N = 85)<sup>a</sup>

Relationship Dimensions	Easy to Talk to	Prompt	Interested	Strict	Talkative	Pleasant
Easy to talk to		.58***	.68***	.17	.36***	.66***
Prompt			.50***	.07	.26**	.57***
Interested				-.07	.43***	.46***
Strict					-.24**	.20*
Talkative						.16
Pleasant						

<sup>a</sup>The actual number of staff was 83; two staff members were counted twice. They worked on two wards and were rated by patients on both wards. Separate correlations were computed for the data from the two wards.

\*p < .05

\*\*p < .01

\*\*\*p < .001

they do with talkative. The nature of the easy to talk to, prompt, interested, and pleasant dimensions suggests that their shared variance may be due to their tapping patients' general positive or negative evaluation of a staff member. Talkative may generally share less variance with these four dimensions because it seems to be less uniformly valued by people than are the other four qualities. While all the intercorrelations between easy to talk to, prompt, interested, talkative, and pleasant achieve significance, no two of these five dimensions overlap so much as to be redundant: Even the two most strongly related dimensions, easy to talk to and interested ( $r = .68$ ), only have 46% of their variance in common. The pattern of intercorrelations obtained in this research is similar to that reported by Hargreaves and Runyon (1969). Their factor analysis of patients' ratings of nursing staff on the Gough Adjective Checklist identified two factors: (a) Factor I, a dimension of "warmth" (warm and close vs. cold and aloof), and (b) Factor II, a dimension of "strength" (confident and assertive vs. tentative and permissive).

#### Staff Demographic Characteristics and the Relationship between A-B Status and Patient Ratings

The intercorrelations of staff A-B scores and demographic characteristics are presented in Table 7.<sup>1</sup> Age shows a nonsignificant nega-

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<sup>1</sup>Because of the large number of correlations computed on the same data, a correlation has to achieve a  $<.01$  significance level before it is considered to be significant; the  $<.05$  significance level is interpreted as marginally significant.

TABLE 7

Intercorrelations of Staff A-B Scores and Demographic Characteristics (N = 85)<sup>a</sup>

Staff Characteristics	A-B Score	Age	Position	Length of Employment at Westboro	Length of Employment in Nursing
A-B Score		-.16	-.08	-.25*	-.27*
Age			-.39	.67**	.72**
Position				-.29*	-.48**
Length of Employment at Westboro					.84**
Length of Employment in Nursing					

<sup>a</sup>The actual number of staff was 83; two staff members were counted twice. They worked on two wards and were rated by patients on both wards. Separate correlations were computed for the data from the two wards.

\*p < .01

\*\*p < .001

tive correlation with A-B scores. The direction of the correlation is consistent with Heaton et al.'s (1975) survey of Seattle psychiatrists in private practice. They found that most of the Bs had graduated from residency training prior to 1960, while most of the As had graduated in more recent years. Position has essentially zero correlation with staff A-B status. Length of employment at Westboro and length of employment in nursing are negatively related to A-B scores at statistically significant levels. Thus, staying at Westboro or in the state hospital system may bear some relationship to having the personality characteristics associated with B status.

Table 8 presents the correlations of staff A-B scores and demographic characteristics with patients' ratings. Thus, by inspecting Table 8 the predictive ability of each of the staff characteristics in relation to ratings by the total patient sample can be compared. None of the correlations between A-B scores and patients' ratings are statistically significant. However, the two correlations between A-B scores and patients' ratings that are of some magnitude, those with easy to talk to and interested are in the expected direction. Each of the staff demographic characteristics shows a correlation of at least marginal statistical significance with one of the patient ratings: Age is marginally related to interested, position significantly with interested, length of employment at Westboro significantly with prompt, and length of employment in nursing marginally with talkative. Also, for five of the six relationship ratings, at least one of the other staff characteristics is a better predictor. A-B scores are the best predictors of easy to talk to but position is a very close second. Because of the

TABLE 8

## Correlations of Staff A-B Scores and Demographic Characteristics

with Patient Ratings (N = 85)<sup>a</sup>

Characteristics	Ratings				
	Easy to Talk to	Prompt	Interested	Strict	Talkative Pleasant
A-B Score	.17	.02	.14	.09	.02 .06
Age	.02	-.09	.23*	-.03	.10 .06
Position	-.16	-.06	-.30**	.05	-.06 -.11
Length of Employment at Westboro	-.07	-.26**	.09	-.16	.14 -.11
Length of Employment in Nursing	-.01	-.14	.14	-.16	.18* .04

<sup>a</sup>The actual number of staff was 83; two staff members were counted twice. They worked on two wards and were rated by patients on both wards. Separate correlations were computed for the data from the two wards.

\*p < .05

\*\*p < .01

number of correlations computed and the small magnitude of even the significant correlations, these results do not seem to provide an adequate basis for making conclusive statements about the relative predictive ability of the staff characteristics studied. However, the results do not suggest that A-B scores are superior as a predictor to the other staff characteristics for ratings by the total patient sample.

To better assess the relationship between staff A-B scores and patients' ratings, the effects of the staff demographic characteristics were partialled out. Table 9 presents the first- and fourth-order correlations between A-B scores and patients' ratings when demographic characteristics are held constant. It can be seen that when either the effects of age or length of employment in nursing are held constant, the correlations of A-B scores with easy to talk to and interested are slightly increased and achieve marginal statistical significance. However, when the four demographic variables are controlled for simultaneously, yielding less confounded estimates of the association between A-B scores and patients' ratings, the correlations of A-B status with easy to talk to and interested lose their marginal significance; in fact, these fourth-order correlations are slightly lower than the zero-order correlations between these variables.

Since the staff demographic characteristics studied seem to have little impact on the relationship between A-B scores and patients' ratings, it was not considered necessary to control for them in the analyses of the effects of patients' characteristics on ratings of A and B staff members (presented below).

TABLE 9  
Partial Correlations between Staff A-B Scores and Patient Ratings--  
Controlling for Staff Demographic Characteristics (N = 85)<sup>a</sup>

Controlling for	Ratings					
	Easy to Talk to	Prompt	Interested	Strict	Talkative	Pleasant
	Zero-Order Correlations <sup>b</sup>					
	.17	.02	.14	.09	.02	.06
First-Order Partial Correlations						
Age	.18*	.01	.18*	.09	.04	.07
Position	.16	.01	.12	.09	.01	.05
Length of Employment at Westboro	.16	-.04	.16	.05	.06	.04
Length of Employment in Nursing	.17*	-.02	.18*	.05	.08	.08
Fourth-Order Partial Correlations						

The above four demographic characteristics .14 -.05 .12 .04 .09 .07

<sup>a</sup>The actual number of staff was 83; two staff members were counted twice. They worked on two wards and were rated by patients on both wards. Separate correlations were computed for the data from the two wards.

<sup>b</sup>The zero-order correlations were included for the purpose of comparison.

\*p < .05

Patient Demographic and Clinical Characteristics and  
Differential Compatibility with A and B Nursing Staff

The hypotheses of the present study predict that patients' diagnosis, chronicity, sex and social class should be related to differential compatibility with A versus B nursing staff members. Patients' perceptions of the nursing staff on six relationship dimensions are the dependent measures. All six dimensions are expected to be affected to some extent by differential compatibility with A versus B staff members. Three of these dimensions, easy to talk to, interested, and pleasant, are expected to be relatively more sensitive to differential compatibility with As versus Bs, and the other three dimensions, strict, talkative, and prompt, relatively more sensitive to differential personality characteristics of As and Bs. The hypotheses of this study are tested with the data for male and female As and Bs considered separately and with the data for the two sexes combined. Thus the comparability of A and B status in males and females in relation to differential compatibility with patients can be evaluated.

Analysis of variance was used to test the hypotheses of this research. To dichotomize the nursing staff into As and Bs the median score for the total staff sample, that is, the score of 56, was used. Staff members scoring above 56 were classified as As while those scoring below 56 were classified as Bs; the staff members who had scores of 56 were divided between the A and B classifications by using a table of random numbers. Table 10 shows the number of male and female staff on each ward who were classified as As or Bs by this procedure. For each

TABLE 10  
Distribution of A and B Staff Members by Ward

Unit	Ward	A		B	
		Female	Male	Female	Male
Marlboro-Westboro	1	4	2	6	3
Cambridge-Somerville	1	5	2	4	1
	2	3	4	4	1
	3	1	3	4	3
Greater Framingham	1	6	4	5	4
	2	4	5	5	2
Totals		23	20	28	14

of the six relationship dimensions, four mean ratings were computed for each patient, the average of her/his ratings for the female As, male As, female Bs, and male Bs.<sup>2</sup> Since the same patients provided the ratings of male and female A and B staff, these ratings were treated as repeated measures in the analyses of variance.

It would have been statistically desirable to test the effects of the five patient characteristics under consideration (i.e., diagnosis, chronicity, sex, achieved social class, social class of origin) simultaneously. However, since the number of patients in the sample is 47, all of the 25 cells would have had few subjects and some may have been empty. Thus, four analyses of variance were conducted on each of the six relationship dimensions. The patient characteristics involved in each analysis were: (a) diagnosis and chronicity (they were tested in the same analysis because Hypothesis 3 predicts an interaction between these two variables); (b) sex, (c) achieved social class (educational level); and (d) social class of origin (father's occupational level). Because of the number of analyses performed, the level of significance considered to be statistically significant was made more stringent than is usual in psychological research; an effect has to achieve  $p < .01$  before it is considered significant and  $p < .05$  before it is considered marginally significant (compared to the usual  $p < .05$  and  $p < .10$ , respective-

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<sup>2</sup>On Cambridge-Somerville 3 where only one female staff member was classified as an A, one of the female patients did not know her and on Cambridge-Somerville 2, where only one of the male staff was classified as a B one of the male patients did not know him. Thus, these two patients were not included in the analyses of variance, reducing the sample size from 49 to 47.

ly).

The results of the analyses of variance are presented in relation to the five patient characteristics under consideration.

### Diagnosis

Two of the hypotheses of the present research concerned the effect of patients' diagnosis on differential compatibility with A versus B nursing staff.

Hypothesis 1. Schizophrenic patients should rate A nursing staff members higher on the six relationship dimensions than they should rate B nursing staff members.

Hypothesis 2. Nonschizophrenics should differ less in their ratings of A and B nursing staff on the six relationship dimensions than should schizophrenics.

The analyses of variance in relation to patient diagnosis are presented in Tables 11 to 16. These analyses involve 24 schizophrenics and 19 nonschizophrenics. The analysis for each of the six relationship dimensions is presented in a separate table. There is a marginally significant interaction effect between staff A-B status and patient diagnosis for the easy to talk to and prompt relationship dimensions. This interaction effect is not significant for the other four relationship dimensions. Examining the cell means for the marginally significant interaction effects (see Tables 17 and 18) indicates the schizophrenics found A staff members easier to talk to than they did Bs (mean ratings = 3.42 and 3.04, respectively) and slightly more prompt than they did Bs (mean ratings = 3.65 and 3.40, respectively). Also, schizophrenics seemed to

TABLE 11

Summary of Analysis of Variance of Easy to Talk to Ratings  
in Relation to Patient Diagnosis and Chronicity  
and Staff A-B Status and Sex (N = 43)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Diagnosis	(A)	1	389.00	389.00	2.35
Chronicity	(B)	1	17.64	17.64	<1
Diagnosis x Chronicity	(AB)	1	192.44	192.44	1.16
	S/AB	39	6456.38	165.54	
A-B Status	(C)	1	155.92	155.92	7.25**
A-B Status x Diagnosis	(AC)	1	116.10	116.10	5.40*
A-B Status x Chronicity	(BC)	1	8.93	8.93	<1
A-B Status x Diagnosis x Chronicity	(ABC)	1	15.19	15.19	<1
	SC/AB	39	838.90	21.51	
Sex	(D)	1	106.23	106.23	2.63
Sex x Diagnosis	(AD)	1	28.85	28.85	<1
Sex x Chronicity	(BD)	1	7.86	7.86	<1
Sex x Diagnosis x Chronicity	(ABD)	1	4.03	4.03	<1
	SD/AB	39	1577.23	40.44	
A-B Status x Sex	(CD)	1	59.86	59.86	1.95
A-B Status x Sex x Diagnosis	(ACD)	1	2.85	2.85	<1
A-B Status x Sex x Chronicity	(BCD)	1	12.16	12.16	<1
A-B Status x Sex x Diagnosis x Chronicity	(ABCD)	1	32.67	32.67	1.07
	SCD/AB	39	1196.14	30.67	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Data on chronicity were not available for four patients.

\*p < .05

\*\*p < .01

TABLE 12

Summary of Analysis of Variance of Prompt Ratings  
in Relation to Patient Diagnosis and Chronicity  
and Staff A-B Status and Sex (N = 43)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Diagnosis	(A)	1	701.27	701.27	3.85
Chronicity	(B)	1	.06	.06	<1
Diagnosis x Chronicity	(AB)	1	40.17	40.17	<1
	S/AB	39	7096.38	181.96	
A-B Status	(C)	1	8.21	8.21	<1
A-B Status x Diagnosis	(AC)	1	165.28	165.28	4.63*
A-B Status x Chronicity	(BC)	1	89.20	89.20	2.50
A-B Status x Diagnosis x Chronicity	(ABC)	1	55.82	55.82	1.56
	SC/AB	39	1391.29	35.67	
Sex	(D)	1	12.52	12.52	<1
Sex x Diagnosis	(AD)	1	146.30	146.30	4.64*
Sex x Chronicity	(BD)	1	131.04	131.04	4.15*
Sex x Diagnosis x Chroni- city	(ABD)	1	.48	.48	<1
	SD/AB	39	1230.74	31.56	
A-B Status x Sex	(CD)	1	31.15	31.15	1.29
A-B Status x Sex x Diagno- sis	(ACD)	1	4.41	4.41	<1
A-B Status x Sex x Chroni- city	(BCD)	1	1.87	1.87	<1
A-B Status x Sex x Diagno- sis x Chronicity	(ABCD)	1	24.09	24.09	<1
	SCD/AB	39	940.26	24.11	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Data on chronicity were not available for four patients.

\*p < .05

TABLE 13

Summary of Analysis of Variance of Interested Ratings  
in Relation to Patient Diagnosis and Chronicity  
and Staff A-B Status and Sex (N = 43)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Diagnosis	(A)	1	612.78	612.78	3.78
Chronicity	(B)	1	.01	.01	<1
Diagnosis x Chronicity	(AB)	1	354.19	354.19	2.18
	S/AB	39	6323.19	162.13	
A-B Status	(C)	1	47.45	47.45	1.35
A-B Status x Diagnosis	(AC)	1	82.40	82.40	2.35
A-B Status x Chronicity	(BC)	1	.00	.00	<1
A-B Status x Diagnosis x Chronicity	(ABC)	1	3.89	3.89	<1
	SC/AB	39	1369.78	35.12	
Sex	(D)	1	18.92	18.92	<1
Sex x Diagnosis	(AD)	1	4.33	4.33	<1
Sex x Chronicity	(BD)	1	41.69	41.69	<1
Sex x Diagnosis x Chroni- city	(ABD)	1	4.09	4.09	<1
	SD/AB	39	1731.24	44.39	
A-B Status x Sex	(CD)	1	62.13	62.13	2.04
A-B Status x Sex x Diagno- sis	(ACD)	1	1.16	1.16	<1
A-B Status x Sex x Chroni- city	(BCD)	1	9.70	9.70	<1
A-B Status x Sex x Diagno- sis x Chronicity	(ABCD)	1	13.63	13.63	<1
	SCD/AB	39	1185.53	30.40	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Data on chronicity were not available for four patients.

TABLE 14

Summary of Analysis of Variance of Strict Ratings  
in Relation to Patient Diagnosis and Chronicity  
and Staff A-B Status and Sex (N = 43)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Diagnosis	(A)	1	297.15	297.15	2.29
Chronicity	(B)	1	508.58	508.58	3.91
Diagnosis x Chronicity	(AB)	1	94.78	94.78	<1
	S/AB	39	5069.46	129.99	
A-B Status	(C)	1	37.58	37.58	1.07
A-B Status x Diagnosis	(AC)	1	4.12	4.12	<1
A-B Status x Chronicity	(BC)	1	7.31	7.31	<1
A-B Status x Diagnosis x Chronicity	(ABC)	1	44.23	44.23	1.26
	SC/AB	39	1365.05	35.00	
Sex	(D)	1	1.95	1.95	<1
Sex x Diagnosis	(AD)	1	83.88	83.88	2.87
Sex x Chronicity	(BD)	1	4.72	4.72	<1
Sex x Diagnosis x Chroni- city	(ABD)	1	46.65	46.65	1.60
	SD/AB	39	1139.40	29.22	
A-B Status x Sex	(CD)	1	47.31	47.31	1.39
A-B Status x Sex x Diagno- sis	(ACD)	1	43.03	43.03	1.26
A-B Status x Sex x Chroni- city	(BCD)	1	6.11	6.11	<1
A-B Status x Sex x Diagno- sis x Chronicity	(ABCD)	1	48.03	48.03	1.41
	SCD/AB	39	1328.97	34.08	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Data on chronicity were not available for four patients.

TABLE 15

Summary of Analysis of Variance of Talkative Ratings  
in Relation to Patient Diagnosis and Chronicity  
and Staff A-B Status and Sex (N = 43)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Diagnosis	(A)	1	73.81	73.81	<1
Chronicity	(B)	1	26.22	26.22	<1
Diagnosis x Chronicity	(AB)	1	3.90	3.90	<1
	S/AB	39	5544.38	142.16	
A-B Status	(C)	1	7.85	7.85	<1
A-B Status x Diagnosis	(AC)	1	68.92	68.92	1.68
A-B Status x Chronicity	(BC)	1	74.26	74.26	1.81
A-B Status x Diagnosis x Chronicity	(ABC)	1	4.04	4.04	<1
	SC/AB	39	1597.45	40.96	
Sex	(D)	1	180.08	180.08	5.60*
Sex x Diagnosis	(AD)	1	11.49	11.49	<1
Sex x Chronicity	(BD)	1	1.24	1.24	<1
Sex x Diagnosis x Chroni- city	(ABD)	1	12.25	12.25	<1
	SD/AB	39	1252.76	32.12	
A-B Status x Sex	(CD)	1	69.75	69.75	2.93
A-B Status x Sex x Diagno- sis	(ACD)	1	100.74	100.74	4.23*
A-B Status x Sex x Chroni- city	(BCD)	1	8.11	8.11	<1
A-B Status x Sex x Diagno- sis x Chronicity	(ABCD)	1	6.80	6.80	<1
	SCD/AB	39	929.04	23.82	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Data on chronicity were not available for four patients.

\*p < .05

TABLE 16

Summary of Analysis of Variance of Pleasant Ratings  
in Relation to Patient Diagnosis and Chronicity  
and Staff A-B Status and Sex (N = 43)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Diagnosis	(A)	1	406.44	406.44	3.77
Chronicity	(B)	1	145.81	145.81	1.35
Diagnosis x Chronicity	(AB)	1	71.95	71.95	<1
	S/AB	39	4201.75	107.74	
A-B Status	(C)	1	1.62	1.62	<1
A-B Status x Diagnosis	(AC)	1	108.35	108.35	3.43
A-B Status x Chronicity	(BC)	1	7.19	7.19	<1
A-B Status x Diagnosis x Chronicity	(ABC)	1	.41	.41	<1
	SC/AB	39	1232.71	31.60	
Sex	(D)	1	22.06	22.06	<1
Sex x Diagnosis	(AD)	1	167.84	167.84	4.28*
Sex x Chronicity	(BD)	1	51.45	51.45	1.31
Sex x Diagnosis x Chroni- city	(ABD)	1	98.45	98.45	2.51
	SD/AB	39	1528.89	39.20	
A-B Status x Sex	(CD)	1	7.25	7.25	<1
A-B Status x Sex x Diagno- sis	(ACD)	1	1.51	1.51	<1
A-B Status x Sex x Chroni- city	(BCD)	1	.14	.14	<1
A-B Status x Sex x Diagno- sis x Chronicity	(ABCD)	1	23.17	23.17	<1
	SCD/AB	39	842.73	21.61	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Data on chronicity were not available for four patients.

\*p < .05

TABLE 17

Mean Easy to Talk to Ratings in  
Relation to Staff A-B Status and Patient Diagnosis

Diagnosis	Staff	
	A	B
Schizophrenic	3.42	3.04
Nonschizophrenic	3.56	3.53

TABLE 18  
Mean Prompt Ratings in Relation to  
Staff A-B Status and Patient Diagnosis

Diagnosis	Staff	
	A	B
Schizophrenic	3.65	3.40
Nonschizophrenic	3.87	4.03

differentiate more between A and B staff members than did nonschizophrenics in terms of ease in talking to them (differences between mean ratings of As and Bs = .37 and .04, respectively) but only slightly more in terms of promptness (differences between mean ratings of As and Bs = .25 and .16, respectively). Further examination of Tables 17 and 18 indicates that in relation to ease in talking to and promptness, schizophrenics and nonschizophrenics differ more in their ratings of B staff members than in their ratings of A staff members (in relation to ease in talking to, schizophrenics' and nonschizophrenics' mean ratings of As were 3.42 and 3.56, respectively, while their mean ratings of Bs were 3.04 and 3.53, respectively; in relation to promptness schizophrenics' and nonschizophrenics' mean ratings of As were 3.65 and 3.87, respectively, whereas their mean ratings of Bs were 3.40 and 4.03, respectively). It should be noted that in relation to both ease in talking to and promptness, nonschizophrenics rated Bs higher than did schizophrenics.

Table 15 indicates that the diagnosis x A-B status x staff sex interaction was marginally significant for patients' ratings of talkativeness. As shown in Tables 11 to 14 and 16, this interaction effect was not significant for the other five relationship dimensions. The cell means for the marginally significant interaction effect are presented in Table 19. While nonschizophrenics rated male Bs as more talkative than did schizophrenics (mean ratings = 3.74 and 3.25, respectively), nonschizophrenics' and schizophrenics' ratings of male As (mean ratings = 3.26 and 3.37, respectively), of female Bs (mean ratings = 3.61 and 3.55, respectively) and female As (mean ratings = 3.72 and 3.61, respectively) differed only slightly. Also nonschizophrenics differentiated more be-

TABLE 19  
 Mean Talkative Ratings in Relation to  
 Staff A-B Status and Sex and Patient Diagnosis

Diagnosis	Male Staff		Female Staff	
	A	B	A	B
Schizophrenics	3.37	3.25	3.61	3.55
Nonschizophrenics	3.26	3.74	3.72	3.61

tween male As and Bs (mean ratings = 3.26 and 3.74, respectively) than did schizophrenics (mean ratings = 3.37 and 3.25, respectively).

As shown in Table 11, there was a significant main effect for A-B status in relation to ease in talking to. The main effect for A-B status was not significant for the other five relationship dimensions (see Tables 12 to 16). The total patient sample found As easier to talk to than were Bs (mean ratings = 3.46 and 3.22, respectively).

Table 15 indicates that the main effect for staff sex approached significance for talkativeness. Consistent with cultural stereotypes, female staff were seen as more talkative than male staff (mean ratings = 3.61 and 3.40, respectively). The interactions between staff sex and patient diagnosis were marginally significant for promptness and pleasantness. Schizophrenic patients rated female staff as more prompt than they did male staff (mean ratings = 3.65 and 3.40, respectively). On the other hand, nonschizophrenic patients rated male staff as more prompt than they did female staff (mean ratings = 4.02 and 3.88, respectively). In relation to pleasantness, schizophrenic and nonschizophrenic patients differ more in their ratings of male than of female staff. Nonschizophrenics rate male staff as more pleasant than do schizophrenics (mean ratings = 4.10 and 3.60, respectively) while nonschizophrenics rate female staff as slightly more pleasant than do schizophrenics (mean ratings = 4.10 and 4.00, respectively).

Finally, there is no significant main effect for diagnosis for any of the six relationship dimensions.

In summary, the results for the dimension of ease in talking to conform most closely to the hypotheses under consideration in this sec-

tion (see Hypotheses 1 and 2 above). Schizophrenics found As easier to talk to than they did Bs. Also, schizophrenics differentiated between As and Bs more in terms of ease in talking to than did nonschizophrenics. The pattern of results in relation to promptness was similar but the differences were smaller. It was also found that schizophrenics and nonschizophrenics differed more in their ratings of B than of A staff members in terms of both ease in talking to and promptness, with nonschizophrenics rating Bs higher than did schizophrenics. The only dimension on which A and B staff members were differentiated by sex was talkativeness, with nonschizophrenics finding male but not female Bs more talkative than did schizophrenics. Also, contrary to prediction, nonschizophrenics differentiated more between male As and Bs in terms of talkativeness than did schizophrenics. Neither the A-B status x diagnosis interaction nor the A-B status x staff sex x diagnosis interaction was significant for the interested, strict, or pleasant dimensions.

The only A-B main effect to achieve significance was in relation to ease in talking to, with As being rated as easier to talk to than Bs. Since, as mentioned above, nonschizophrenics differed only slightly in their ratings of As and Bs on this dimension, schizophrenics' rating As as easier to talk to than Bs seems to be the primary contributor to this significant main effect.

The above results do not support the proposition that the easy to talk to, interested, and pleasant dimensions should be more sensitive to differential compatibility with As versus Bs than should the prompt, strict, and talkative dimensions. If schizophrenics and nonschizophrenics differed in their compatibility with As versus Bs, it seemed that

this difference should be indicated in the A-B status x diagnosis interaction effects or the A-B status x staff sex x diagnosis interaction effects. The two A-B status x diagnosis interaction effects which approached significance were in relation to the easy to talk to and prompt dimensions while the one A-B status x staff sex x diagnosis interaction of marginal significance was in relation to talkativeness. The above results also do not support the proposition that the prompt, strict, and talkative dimensions should be more sensitive to general personality differences of As and Bs than should the easy to talk to, interested, and pleasant dimensions. It seemed that general personality differences between A and B staff in relation to the six rating dimensions should be indicated by main effects for A-B status. As mentioned above, only one A-B status main effect was significant, that in relation to ease in talking to.

### Chronicity

In regard to the effects of patients' chronicity on differential compatibility with A versus B nursing staff, it was predicted:

Hypothesis 3. Schizophrenics of high chronicity should rate As higher relative to Bs than should schizophrenics of low chronicity.

Hypothesis 4: Patients of high chronicity should rate As higher relative to Bs than should patients of low chronicity.

Patients were dichotomized in terms of chronicity by using the median percentage of life hospitalized, 7%. Twenty-three out of the 43

patients for whom data were available,<sup>3</sup> had been hospitalized 7% or less of their lives, while 20 patients had been hospitalized more than 7% of their lives. While 10 schizophrenics had been hospitalized 7% or less of their lives and 14 schizophrenics more than 7%, 13 nonschizophrenics had been hospitalized 7% or less of their lives and six nonschizophrenics more than 7%.

As shown in Tables 11 to 16, the interaction between staff A-B status and patient chronicity was not significant for any of the six relationship dimensions. Also, the A-B status x diagnosis x chronicity interaction was not significant for any of those six dimensions. In addition, neither the A-B status x staff sex x diagnosis interaction nor the A-B status x staff sex x diagnosis x chronicity interaction was significant for any of the six relationship dimensions. Thus, chronicity does not seem to have been a basis of differential compatibility with A versus B nursing staff.

Patient chronicity does tend to affect their ratings of male versus female staff's promptness ( $F = 4.15$ ,  $df = 1/39$ ,  $p < .05$ ). Patients of low chronicity rate female staff as more prompt than they do males (mean ratings = 3.86 and 3.62, respectively). On the other hand, patients of high chronicity rate male staff as more prompt than they do female staff (mean ratings = 3.80 and 3.68, respectively). Patient chronicity did not significantly affect their ratings of male versus female staff on the other five relationship dimensions. There was no significant main

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<sup>3</sup>Data on previous psychiatric hospitalizations were missing for four patients.

effect for chronicity on any of the six relationship dimensions.

### Sex

It was predicted:

Hypothesis 5. Female patients should rate As higher on the six relationship dimensions than they should rate Bs. On the other hand, male patients should rate Bs higher on the six relationship dimensions than they rate As.

The analyses of variance in Tables 20 to 25 are based on 26 male and 21 female patients.

The staff A-B status x patient sex interaction approaches significance for the easy to talk to dimension but is not statistically or marginally significant for the other five relationship dimensions. Contrary to prediction, male patients found As easier to talk to than they did Bs (mean ratings = 3.43 and 3.10, respectively) while female patients did not differentiate between As and Bs (mean ratings = 3.45 for both) (see Table 26). The staff A-B status x staff sex x patient sex interaction was not significant for any of the six relationship dimensions.

There is a marginally significant interaction between patient and staff sex for the dimension of interest. This interaction is not of marginal or statistical significance for the other five relationship dimensions. While female patients rate female staff as more interested in them than they rate male staff (mean ratings = 3.88 and 3.65, respectively), male patients do not differentiate between female and male staff (mean ratings = 3.51 and 3.56, respectively).

There is no significant main effect for patient sex on any of the

TABLE 20

Summary of Analysis of Variance of Easy to Talk to Ratings  
in Relation to Patient Sex and Staff  
A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Patient sex	(A)	1	164.16	164.16	1.00
	S/A	45	7371.04	163.80	
A-B Status	(C) <sup>a</sup>	1	125.63	125.63	4.12*
A-B Status x Patient sex	(AC)	1	125.63	125.63	4.12*
	SC/A	45	1372.09	30.49	
Staff sex	(D) <sup>a</sup>	1	251.90	251.90	6.20*
Staff sex x Patient sex	(AD)	1	89.26	89.26	2.20
	SD/A	45	1827.45	40.61	
A-B Status x Staff sex	(CD)	1	29.60	29.60	<1
A-B Status x Staff sex x Patient sex	(ACD)	1	67.13	67.13	2.19
	SCD/A	45	1378.01	30.62	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The letter B was skipped in order to use the same letters to designate the effects of A-B Status and Staff Sex as were used in the four-way analysis of variance tables.

\*p < .05

TABLE 21

Summary of Analysis of Variance of Prompt Ratings in Relation  
to Patient Sex and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Patient sex	(A)	1	593.01	593.01	3.60
	S/A	45	7417.99	164.84	
A-B Status	(C) <sup>a</sup>	1	19.75	19.75	<1
A-B Status x Patient sex	(AC)	1	75.07	75.07	1.97
	SC/A	45	1714.80	38.11	
Staff sex	(D) <sup>a</sup>	1	76.38	76.38	2.21
Staff sex x Patient sex	(AD)	1	51.36	51.36	1.48
	SD/A	45	1557.28	34.61	
AB Status x Staff sex	(CD)	1	91.34	91.34	3.62
AB Status x Staff sex x Patient sex	(ACD)	1	.02	.02	<1
	SCD/A	45	1134.30	25.21	

Note. Each ratings was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The letter B was skipped in order to use the same letters to designate the effects of A-B Status and Staff Sex as were used in the four-way analysis of variance tables.

TABLE 22

Summary of Analysis of Variance of Interested Ratings in Relation  
to Patient Sex and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Patient sex	(A)	1	456.05	456.05	2.25
	S/A	45	9136.11	203.02	
A-B Status	(C) <sup>a</sup>	1	30.80	30.80	<1
A-B Status x Patient sex	(AC)	1	19.48	19.48	<1
	SC/A	45	1711.13	38.03	
Staff sex	(D) <sup>a</sup>	1	118.93	118.93	3.00
Staff sex x Patient sex	(AD)	1	212.46	212.46	5.36*
	SD/A	45	1783.27	39.63	
A-B Status x Staff sex	(CD)	1	101.13	101.13	3.26
A-B Status x Staff sex x Patient sex	(ACD)	1	32.20	32.20	1.04
	SCD/A	45	1394.11	30.98	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The letter B was skipped in order to use the same letters to designate the effects of A-B Status and Staff Sex as were used in the four-way analysis of variance tables.

\*p < .05

TABLE 23

Summary of the Analysis of Variance of Strict Ratings in Relation  
to Patient Sex and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Patient sex	(A)	1	5.73	5.73	<1
	S/A	45	6740.58	149.79	
A-B Status	(C) <sup>a</sup>	1	19.01	19.01	<1
A-B Status x Patient sex	(AC)	1	4.54	4.54	<1
	SC/A	45	1481.42	32.92	
Staff sex	(D) <sup>a</sup>	1	.45	.45	<1
Staff sex x Patient sex	(AD)	1	15.34	15.34	<1
	SD/A	45	1395.71	31.02	
A-B Status x Staff sex	(CD)	1	132.86	132.86	4.05*
A-B Status x Staff sex x Patient sex	(ACD)	1	16.44	16.44	<1
	SCD/A	45	1475.30	32.78	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The letter B was skipped in order to use the same letters to designate the effects of A-B Status and Staff Sex as were used in the four-way analysis of variance tables.

\*p < .05

TABLE 24

Summary of the Analysis of Variance of Talkative Ratings in Relation to Patient Sex and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Patient sex	(A)	1	88.32	88.32	<1
	S/A	45	7363.05	163.62	
A-B Status	(C) <sup>a</sup>	1	.52	.52	<1
A-B Status x Patient sex	(AC)	1	.52	.52	<1
	SC/A	45	1916.09	42.58	
Staff sex	(D) <sup>a</sup>	1	255.48	255.48	7.32*
Staff sex x Patient sex	(AD)	1	41.14	41.14	1.18
	SD/A	45	157.30	34.92	
A-B Status x Staff sex	(CD)	1	85.64	85.64	3.31
A-B Status x Staff sex x Patient sex	(ACD)	1	25.35	25.35	<1
	SCD/A	45	1162.96	25.84	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The letter B was skipped in order to use the same letters to designate the effects of A-B Status and Staff Sex as were used in the four-way analysis of variance tables.

\*p < .01

TABLE 25

Summary of the Analysis of Variance of Pleasant Ratings in Relation  
to Patient Sex and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Patient sex	(A)	1	378.12	378.12	3.49
	S/A	45	4882.13	108.49	
A-B Status	(C) <sup>a</sup>	1	3.67	3.67	<1
A-B Status x Patient sex	(AC)	1	71.76	71.76	1.99
	SC/A	45	1626.70	36.15	
Staff sex	(D) <sup>a</sup>	1	127.80	127.80	2.98
Staff sex x Patient sex	(AD)	1	17.34	17.34	<1
	SD/A	45	1927.57	42.83	
A-B Status x Staff sex	(CD)	1	34.07	34.07	1.48
A-B Status x Staff sex x Patient sex	(ACD)	1	42.07	42.07	1.82
	SCD/A	45	1037.35	23.05	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The letter B was skipped in order to use the same letters to designate the effects of A-B Status and Staff Sex as were used in the four-way analysis of variance tables.

TABLE 26  
Mean Easy to Talk to Ratings in Relation  
to Staff A-B Status and Patient Sex

Sex	Staff	
	A	B
Male	3.43	3.10
Female	3.45	3.45

six relationship dimensions.

(The results for the main effects of A-B status and for the A-B status x staff sex interaction presented in Tables 20 to 25 are based on essentially the same patient sample as the results for these effects presented in Tables 11 to 16. Thus, to avoid redundancy, the results for these effects are not discussed again in this section or in section below on patient social class. The sum of squares for these effects differ somewhat between the sets of tables because due to missing data, the analyses of variance for different patient characteristics are sometimes based on slightly different sample sizes. That is, the analyses for diagnosis and chronicity are based on a total of 43 patients, the analyses for patient sex and achieved social class on 47 patients, and the analysis for social class of origin on 42 patients. The sums of squares also differ because the designs are nonorthogonal, that is, there are different numbers of patients at different levels of the patient variables. When designs are not orthogonal, the sums of squares for different effects are not independent and this is taken into account in the partitioning of the variance. The F ratios differ somewhat among the sets of tables for the above reasons and also because different error terms were used.)

### Social Class

It was expected that:

Hypothesis 6. Higher social class patients should rate As higher on the six relationship dimensions than they should rate Bs. On the other hand, lower social class patients should rate Bs higher on the

six relationship dimensions than they should rate As.

The above hypothesis was tested for measures of achieved social class and social class of origin, that is, patients' educational level and their fathers' occupational level, respectively. In terms of achieved social class, patients who had attended college were classified as high ( $n = 17$ ), patients who graduated from high school as middle ( $n = 13$ ), and patients who had not graduated from high school as low social class ( $n = 17$ ). In relation to social class of origin, Warner et al. (1960) occupational ratings of I, II, III ( $n = 16$ ) were considered indicative of high, ratings IV and V ( $n = 11$ ) of middle, and ratings VI and VII ( $n = 15$ ) of low social class.<sup>4</sup>

For achieved social class, the A-B status x social class interaction effect and the A-B status x staff sex x social class interaction effect were not significant for any of the six relationship dimensions (see Tables 27 to 32).

The main effect of achieved social class approached significance for the dimensions of prompt and strict but was not marginally or statistically significant for the other four relationship dimensions. Middle class patients rated the nursing staff as less prompt (mean ratings = 3.28) than did high social class patients (mean rating = 3.89) or low social class patients (mean rating = 3.83). Middle class patients rated the nursing staff as more lenient (mean rating = 2.99) than did either high social class patients (mean rating = 2.64) or low social class pa-

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<sup>4</sup>Data on fathers' occupational level were not available for five patients.

TABLE 27

Summary of the Analysis of Variance of Easy to Talk  
to Ratings in Relation to Patient Achieved Social Class  
and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (A) <sup>a</sup>	(A)	2	54.42	27.21	<1
	S/A	44	7480.78	170.20	
A-B Status	(C)	1	142.45	142.45	4.23*
A-B Status x Social class (A)	(AC)	2	17.41	8.71	<1
	SC/A	44	1480.29	33.64	
Sex	(D)	1	248.43	248.43	5.87*
Sex x Social class (A)	(AD)	2	54.61	27.31	<1
	SD/A	44	1862.10	42.32	
A-B Status x Sex	(CD)	1	19.05	19.05	<1
A-B Status x Sex x Social class (A)	(ACD)	2	17.25	8.63	<1
	SCD/A	44	1427.87	32.45	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The A is used to distinguish the analysis of variance of achieved social class from that of social class of origin (presented in Tables 33 to 38).

\*p < .01

TABLE 28

Summary of the Analysis of Variance of Prompt Ratings in Relation to Patient Achieved Social Class and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social Class (A) <sup>a</sup>	(A)	2	1261.87	630.93	4.11*
	S/A	44	6749.13	153.39	
A-B Status	(C)	1	33.83	33.83	<1
A-B Status x Social class (A)	(AC)	2	13.50	6.75	<1
	SC/A	44	1776.37	40.37	
Sex	(D)	1	80.20	80.20	2.31
Sex x Social class (A)	(AD)	2	83.38	41.69	1.20
	SD/A	44	1525.26	34.67	
A-B Status x Sex	(CD)	1	80.02	80.02	3.17
A-B Status x Sex x Social class (A)	(ACD)	2	23.22	11.60	<1
	SCD/A	44	1111.10	25.25	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The A is used to distinguish the analysis of variance of achieved social class from that of social class of origin (presented in Tables 33 to 38).

\*p < .05

TABLE 29

Summary of the Analysis of Variance of Interested Ratings in Relation to Patient Achieved Social Class and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (A) <sup>a</sup>	(A)	2	51.29	25.64	<1
	S/A	44	9540.87	216.84	
A-B Status	(C)	1	43.30	43.30	1.11
A-B Status x Social class (A)	(AC)	2	21.64	10.82	<1
	SC/A	44	1708.97	38.84	
Sex	(D)	1	113.05	113.05	2.64
Sex x Social class (A)	(AD)	2	110.82	55.41	1.29
	SD/A	44	1884.92	42.84	
A-B Status x Sex	(CD)	1	110.67	110.67	3.44
A-B Status x Sex x Social class (A)	(ACD)	2	9.35	4.68	<1
	SCD/A	44	1416.96	32.20	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The A is used to distinguish the analysis of variance of achieved social class from that of social class of origin (presented in Table 33 to 38).

TABLE 30

Summary of the Analysis of Variance of Strict Ratings in Relation to Patient Achieved Social Class and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (A) <sup>a</sup>	(A)	2	864.00	432.00	3.23*
	S/A	44	5882.31	133.70	
A-B Status	(C)	1	22.70	22.70	<1
A-B Status x Social class (A)	(AC)	2	54.20	27.10	<1
	SC/A	44	1431.77	32.54	
Sex	(D)	1	.01	.01	<1
Sex x Social class (A)	(AD)	2	65.71	32.86	1.07
	SD/A	44	1345.34	30.58	
A-B Status x Sex	(CD)	1	112.18	112.18	3.34
A-B Status x Sex x Social class (A)	(ACD)	2	14.72	7.36	<1
	SCD/A	44	1477.01	33.57	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The A is used to distinguish the analysis of variance of achieved social class from that of social class of origin (presented in Tables 33 to 38).

\*p < .05

TABLE 31

Summary of the Analysis of Variance of Talkative Ratings in Relation to Patient Achieved Social Class and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (A) <sup>a</sup>	(A)	2	417.70	208.85	1.31
	S/A	44	7033.67	159.86	
A-B Status	(C)	1	.19	.19	<1
A-B Status x Social class (A)	(AC)	2	140.57	70.29	1.74
	SC/A	44	1776.03	40.36	
Sex	(D)	1	234.72	234.72	6.53*
Sex x Social class (A)	(AD)	2	30.30	15.15	<1
	SD/A	44	1582.13	35.96	
A-B Status x Sex	(CD)	1	79.19	79.19	3.06
A-B Status x Sex x Social class (A)	(ACD)	2	48.39	24.20	<1
	SCD/A	44	1139.92	25.91	

Note: Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The A is used to distinguish the analysis of variance of achieved social class from that of social class of origin (presented in Tables 33 to 38).

\*p < .05

TABLE 32

Summary of the Analysis of Variance of Pleasant Ratings in Relation to Patient Achieved Social Class and Staff A-B Status and Sex (N = 47)

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (A)	(A)	2	127.35	63.67	<1
	S/A	44	5132.90	116.66	
A-B Status	(C)	1	.21	.21	<1
A-B Status x Social class (A)	(AC)	2	119.85	59.93	1.67
	SC/A	44	1578.61	35.88	
Sex	(D)	1	151.28	151.28	3.51
Sex x Social class (A)	(AD)	2	50.31	25.16	<1
	SD/A	44	1894.59	43.06	
A-B Status x Sex	(CD)	1	39.80	39.80	1.63
A-B Status x Sex x Social class (A)	(ACD)	2	3.49	1.74	<1
	SCD/A	44	1075.92	24.45	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>The A is used to distinguish the analysis of variance of achieved social class from that of social class of origin (presented in Tables 33 to 38).

tients (mean rating = 2.46), with high social class patient rating the staff as more lenient than did low social class patients.

For social class of origin, neither the A-B status x social class interaction effect nor the A-B status x staff sex x social class interaction effect were significant for any of the six relationship dimensions (see Tables 33 to 38). These results are consistent with those for achieved social class and taken together indicate that patients' social class was not a basis for differential compatibility.

The interaction effect between staff sex and social class of origin approached significance for the dimension of talkativeness. While female staff are seen as more talkative than male staff by high social class patients (mean ratings = 3.54 and 3.10, respectively) and middle social class (mean ratings = 3.54 and 3.15, respectively), low social class patients find male staff to be slightly more talkative than female staff (mean ratings = 3.81 and 3.68, respectively).

#### Patients' Predictions of Nursing Staff Members' Responses to the A-B Scale

The present research examined whether patients perceived A and B staff members as different in the terms of the A-B scale itself. Two male staff members on each ward were selected for this part of the research.<sup>5</sup> To control for the possible effects of staff members' age on

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<sup>5</sup>Three staff members were selected on one ward. The third staff member, a high scorer, was to be paired with a staff member on another ward where all the staff members were low scorers. None of the patients on the latter ward, however, met the criteria for inclusion in the pres-

TABLE 33

Summary of the Analysis of Variance of Easy to Talk to  
 Ratings in Relation to Patient Social Class  
 of Origin and Staff A-B Status and Sex (N = 42)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (0) <sup>b</sup>	(A)	2	273.86	136.93	<1
	S/A	39	6641.55	170.30	
A-B Status	(C)	1	153.64	153.64	4.64*
A-B Status x Social class (0)	(AC)	2	139.52	69.76	2.11
	SC/A	39	1290.22	33.08	
Sex	(D)	1	106.93	106.93	2.47
Sex x Social class (0)	(AD)	2	147.36	73.68	1.70
	SD/A	39	1686.38	43.24	
A-B Status x Sex	(CD)	1	25.97	25.97	<1
A-B Status x Sex x Social class (0)	(ACD)	2	8.21	4.10	<1
	SCD/A	39	1376.91	35.31	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Social class of origin as measured by father's occupational level was not available for five patients.

<sup>b</sup>The 0 is used to distinguish the analysis of variance of social class of origin from that of achieved social class (presented in Tables 27 to 32).

\*p < .05

TABLE 34

Summary of the Analysis of Variance of Prompt  
Ratings in Relation to Patient Social Class  
of Origin and Staff A-B Status and Sex (N = 42)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (0)	(A)	2	74.84	37.42	<1
	S/A	39	7234.95	185.51	
A-B Status	(C)	1	18.95	18.95	<1
A-B Status x Social class (0)	(AC)	2	217.31	108.65	2.83
	SC/A	39	1495.76	38.35	
Sex	(D)	1	41.66	41.66	1.20
Sex x Social class (0)	(AD)	2	214.39	107.20	3.08
	SD/A	39	1357.23	34.80	
A-B Status x Sex	(CD)	1	43.53	43.53	1.74
A-B Status x Sex x Social class (0)	(ACD)	2	57.55	28.78	1.15
	SCD/A	39	976.78	25.05	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Social class of origin as measured by father's occupational level was not available for five patients.

<sup>b</sup>The 0 is used to distinguish the analysis of variance of social class of origin from that of achieved social class (presented in Tables 27 to 32).

TABLE 35

Summary of the Analysis of Variance of Interested  
Ratings in Relation to Patient Social Class  
of Origin and Staff A-B Status and Sex (N = 42)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (0)	(A)	2	705.28	352.64	1.66
	S/A	39	8274.92	212.18	
A-B Status	(C)	1	18.84	18.84	<1
A-B Status x Social class (0)	(AC)	2	84.28	42.14	1.02
	SC/A	39	1615.25	41.42	
Sex	(D)	1	48.01	48.01	1.01
Sex x Social class (0)	(AD)	2	63.80	31.90	
	SD/A	39	1859.97	47.69	
A-B Status x Sex	(CD)	1	98.74	98.74	2.98
A-B Status x Sex x Social class (0)	(ACD)	2	120.53	60.27	1.82
	SCD/A	39	1290.71	33.10	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Social class of origin as measured by father's occupational level was not available for five patients.

<sup>b</sup>The 0 is used to distinguish the analysis of variance of social class of origin from that of achieved social class (presented in Tables 27 to 32).

TABLE 36

Summary of the Analysis of Variance of Strict  
Ratings in Relation to Patient Social Class  
of Origin and Staff A-B Status and Sex (N = 42)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (0)	(A)	2	440.40	220.20	1.51
	S/A	39	5691.01	145.92	
A-B Status	(C)	1	39.46	39.46	1.22
A-B Status x Social class (0)	(AC)	2	19.32	9.66	<1
	SC/A	39	1259.14	32.29	
Sex	(D)	1	3.69	3.69	<1
Sex x Social class (0)	(AD)	2	16.82	8.40	<1
	SD/A	39	1273.21	32.65	
A-B Status x Social class (0)	(CD)	1	76.18	76.18	2.11
A-B Status x Sex x Social class (0)	(ACD)	2	12.12	6.06	<1
	SCD/A	39	1410.63	36.17	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Social class of origin as measured by father's occupational level was not available for five patients.

<sup>b</sup>The 0 is used to distinguish the analysis of variance of social class of origin from that of achieved social class (presented in Tables 27 to 32).

TABLE 37

Summary of the Analysis of Variance of Talkative  
Ratings in Relation to Patient Social Class  
of Origin and Staff A-B Status and Sex (N = 42)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (0)	(A)	2	694.88	347.44	2.01
	S/A	39	6736.02	172.72	
A-B Status	(C)	1	.04	.04	<1
A-B Status x Social class (0)	(AC)	2	91.40	45.70	1.01
	SC/A	39	1768.50	45.35	
Sex	(D)	1	222.86	222.86	6.65*
Sex x Social class (0)	(AD)	2	288.53	144.27	4.50*
	SD/A	39	1250.09	32.05	
A-B Status x Social class (0)	(CD)	1	51.46	51.46	1.80
A-B Status x Sex x Social class (0)	(ACD)	2	2.45	1.23	<1
	SCD/A	39	1113.17	28.54	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Social class of origin as measured by father's occupational level was not available for five patients.

<sup>b</sup>The 0 is used to distinguish the analysis of variance of social class of origin from that of achieved social class (presented in Tables 27 to 32).

\*p < .05

TABLE 38

Summary of the Analysis of Variance of Pleasant  
Ratings in Relation to Patient Social Class  
of Origin and Staff A-B Status and Sex (N = 42)<sup>a</sup>

	<u>SV</u>	<u>df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>
Social class (0)	(A)	2	19.72	9.86	<1
	S/A	39	4808.54	123.30	
A-B Status	(C)	1	3.49	3.49	<1
A-B Status x Social class (0)	(AC)	2	178.38	178.38	2.50
	SC/A	39	1392.36	35.70	
Sex	(D)	1	68.21	68.21	1.71
Sex x Social class (0)	(AD)	2	256.65	128.32	3.21
	SD/A	39	1559.10	39.98	
A-B Status x Social class (0)	(CD)	1	8.14	8.14	<1
A-B Status x Sex x Social class (0)	(ACD)	2	3.12	1.56	<1
	SCD/A	39	893.63	22.91	

Note. Each rating was multiplied by a factor of ten for computational purposes.

<sup>a</sup>Social class of origin as measured by father's occupational level was not available for five patients.

<sup>b</sup>The 0 is used to distinguish the analysis of variance of social class of origin from that of achieved social class (presented in Tables 27 to 32).

patients' responses, a basis for selection was that the two staff members' ages not differ by more than ten years. Compared to any other pair of staff members whose ages fell within a ten-year range, the two staff members selected from a ward had A-B scores which differed more. Patients were asked to complete an A-B scale for each of these staff members with instructions to answer the items as they thought the staff member would fill it out for himself.

Table 39 shows each of the staff members actual A-B score and his mean predicted A-B score. The correlation between these two scores is .53, indicating a moderately strong relationship between the two scores. However, in inspecting the mean predicted A-B scores, the investigator noticed that patients seemed to be differentiating between college educated and non-college educated staff members. Table 39 indicates the educational background of staff members. To control for educational differences, the relationship between staff members' A-B scores and their mean predicted A-B scores was computed separately for the college-educated ( $n = 4$ ) and non-college-educated ( $n = 13$ ) staff. The correlation for college-educated staff was .38 while that for non-college educated staff was .18. Thus, non-college-educated staff's A-B status seems to bear little relationship to patients' perceptions of them in terms of the A-B scale itself, while there does seem to be some relationship between actual and predicted A-B scores for college-educated staff. It is difficult to interpret the meaning of these results because of small sample

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ent research so the low scoring member could not be included in this sample.

TABLE 39

Patients' Mean Predicted A-B Scores for High and Low Scoring  
Male Staff in Relation to Staff Educational Level (N = 13)

Educational Level	Actual A-B Score	Mean Predicted A-B Score
College	70	61
	69	67
	65	64
	64	59
No College	67	50
	63	50
	61	57
	55	62
	50	41
	42	48
	37	49
	34	59
	33	45

size. It does seem that in further investigations of this relationship, staff members' educational level should be controlled.

## CHAPTER VI

## DISCUSSION

The results of the present study provide little support for the relevance of the A-B variable to the helping relationship under consideration, that of nursing staff with patients in a state hospital. Analysis of the effects of staff A-B status and sex, and patient characteristics yielded few results which approached or achieved statistical significance (defined as  $p < .05$  and  $p < .01$ , respectively, in this study). Since a relatively large number of analyses were performed on the same data, even with more stringent criteria for significance, at least some of these results may be due to chance. Therefore, the trends in the results are considered to be merely suggestive and in need of further investigation.

Of the five patient characteristics considered in this research, the results provide the most support for diagnosis as a basis of differential compatibility with A-B nursing staff. Schizophrenics and non-schizophrenics tended to differ in their experience of (a) how easy it would be to talk to A versus B staff about personal thoughts, feelings, and problems, (b) how promptly As versus Bs filled their requests, and (c) how talkative male A versus male B staff were. While patients' sex tended to affect their perceptions of their ease in talking to As versus Bs about personal matters, males and females did not differ in their experience of As and Bs in relation to the five other relationship dimensions studied. The three other patient characteristics investigated, chronicity, achieved social class, and social class of origin, did not

affect patients' perceptions of A and B staff in regard to any of the six relationship dimensions involved in this study.

In relation to the three dimensions of relationships with As and Bs affected by diagnosis, schizophrenics rated As higher than Bs in terms of ease in talking to and promptness but did not differentiate between male As and male Bs in terms of talkativeness; whereas nonschizophrenics rated Bs higher than As on promptness and male Bs higher than male As on talkativeness but did not differentiate between As and Bs in regard to ease in talking to. Thus, when schizophrenics differentiated between A and B staff, they rated As higher than Bs as hypothesized. This hypothesis was based on the previous A-B literature which indicated, in general, that A helpers were more compatible with schizophrenics than were B helpers (e.g., Betz, 1967).

The hypothesis that schizophrenics should differentiate more between As and Bs than did nonschizophrenics does not seem to be an accurate explanation of the obtained differences between schizophrenics and nonschizophrenics. While schizophrenics did differentiate more between As and Bs in relation to ease in talking to and promptness than did nonschizophrenics, the latter difference was slight and nonschizophrenics differentiated more between male As and Bs in relation to talkativeness. An explanation that seems to better fit the data than the above hypothesis is that while schizophrenics experienced greater compatibility with As than Bs, nonschizophrenics experienced their greater compatibility with Bs. In relation to both promptness and talkativeness, the two dimensions on which nonschizophrenics differentiated between As and Bs, nonschizophrenics rated Bs higher than As. Thus, the findings of the

present study in regard to nonschizophrenics are not congruent with Whitehorn and Betz's (1954) results on neurotic or depressive inpatients. Whitehorn and Betz's A and B psychiatric residents did not differ in their compatibility with either the neurotics or depressives. As mentioned earlier, the nonschizophrenic sample in the present study differed in composition from both of Whitehorn and Betz's nonschizophrenic samples. The present nonschizophrenic sample was comprised of a majority of patients (12 out of 19) with diagnoses of personality disorder, five patients with primary diagnoses of manic-depressive illness, and four patients with primary diagnoses of alcoholism and secondary diagnoses of depression; none of the patients were diagnosed as neurotic. Of the clinical populations studied in previous A-B research, the results for these nonschizophrenics most closely resemble those for outpatient neurotics. McNair et al. (1962) found that B therapists were more effective with V.A. mostly neurotic outpatients than were As while Berzins et al. (1972) reported that B therapists were more successful with neurotic than schizoid college students. Since the majority of nonschizophrenics in the present research had diagnoses of personality disorder, the present findings raise the possibility that patients with personality disorders may be similar to outpatient neurotics in terms of differential compatibility with As and Bs. It would seem worthwhile for further investigations of the A-B variable to explore this possibility by including samples of "personality-disordered" subjects in their designs.

Severity of disorder as measured by chronicity<sup>6</sup> was not a basis of

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<sup>6</sup>As discussed above, the index of chronicity used in the present

differential compatibility with A and B staff for schizophrenics or for the total patient sample. Contrary to prediction, schizophrenics of high chronicity did not rate As higher relative to Bs than did schizophrenics of low chronicity. Similarly, for the total patient sample, patients of high chronicity did not show more preference for As relative to Bs than did patients of low chronicity. The present study's results for chronicity in schizophrenics contrasts with previous A-B research in which the "process-nonprocess" distinction was used to classify schizophrenics in terms of severity of disorder. The "process-nonprocess" distinction is typically made by assessing type of onset and symptoms (e.g., acuteness of onset, presence of confusion and disorientation in the initial mental state, presence of depressed affect) and/or level of premorbid social adjustment (e.g., marital status, educational level, employment history) (Phillips, 1966). The term "process" is applied to those schizophrenic patients whose disorder is seen to be chronic in nature while the term "nonprocess" is applied to those schizophrenic patients whose disturbance is seen to be acute.

Betz (1963b) reported that when the prognostic designation of "process-nonprocess" was made (this designation was based on type of onset and symptoms), differential success rates between A and B therapists were even more striking with "process" than with "nonprocess" schizophrenics. With "process" patients, As had 70% improvement rates, Bs had 18%; with "nonprocess" patients, As had 68% and Bs, 44%. Trattner and

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research was the percentage of a patient's life s/he had been hospitalized.

Howard (1970) classified patients in terms of prognosis on the basis of premorbid social adjustment. They found that A type attendants inadvertently influenced "process" schizophrenics more on a picture-rating task and responded more favorably to them on a number of affective dimensions (likewise B type attendants with nonprocess schizophrenics). The present study's failure to replicate these findings of differential compatibility with As versus Bs may be due to the measure of severity of disorder used in this research, that is chronicity. Because of the selection procedure involved in a patient's being sent to Westboro (described below), the majority of even those schizophrenics classified as "low chronicity" might have been classified as "process" by the criteria used by Betz (1963b) and Trattner and Howard (1966).

With the acceptance of the community mental health ideology, patients who in the past would have been sent to state hospitals are now being treated as outpatients at community mental health centers and day hospitals, and in psychiatric wards in general hospitals. Each of the catchment areas served by Westboro State Hospital also includes facilities of the above types as part of its community mental health system. The treatment programs of the general hospital psychiatric wards differ from that of Westboro in offering more active, structured and psychotherapeutically-oriented treatment and in providing only short-term care (2-3 month maximum stay). When hospitalization is deemed necessary, the decision by the mental health system to admit a patient to Westboro rather than the general hospital psychiatric ward is generally made when on the basis of her/his previous psychiatric history, s/he is seen as not being able to profit from the more intensive treatment and/or short

care the latter ward provides. Very few patients are admitted to West-boro for their first psychiatric hospitalization; when they are, it is almost always because they have been sent by the court for an evaluation in relation to pending charges.

Research on the interest patterns (Lorr & McNair, 1966), perceptual and cognitive styles (Carson, 1967), and personality characteristics (Berzins et al., 1971) of A and B individuals has suggested that As would have more in common with female and Bs with male patients. These similarities were seen to facilitate the establishment of an effective working relationship. The present research was the first study to include analyses of the effects of patient sex on relationships with A and B helpers. Male and female patients tended to differ in their ratings of the ease of talking to A versus B staff but patient sex did not affect ratings on the five other relationship dimensions. Contrary to prediction, male patients found A staff easier to talk to than they did B staff. Female patients did not differentiate between As and Bs. Male and female patients' ratings of As and Bs in relation to ease of talking to were strikingly like those of schizophrenics and nonschizophrenics, respectively. Schizophrenics found As easier to talk to than Bs while nonschizophrenics did not differentiate between As and Bs. Since 16 out of the 26 male patients were diagnosed as schizophrenic whereas 11 of the 21 female patients were diagnosed as nonschizophrenic, the differences obtained between male and female patients may be due to differences in diagnostic composition of these samples.

The present research was also the first study to include analyses of the effects of patient social class on differential compatibility with

A versus B helpers. From differences in As and Bs interests, it has been inferred that Bs may have more similar backgrounds, more similar interests, or may be more familiar with the daily problems of lower class patients (likewise As with middle class patients) (McNair et al., 1962). These similarities were seen to facilitate communication and relationship-formation. The results of the present study did not support the hypothesis that patient social class is a basis of differential compatibility with A versus B nursing staff. Neither achieved social class (patients' educational level) nor social class of origin (their fathers' occupational level) affected patients' ratings of As versus Bs on any of the six relationship dimensions studied.

One of the aims of the present research was to assess further the applicability of the A-B scale to female helpers. With one exception (Stephens et al., 1975), previous studies on the performance correlates of A-B status have failed to examine the data in terms of helpers' sex. Based on their reanalysis of Whitehorn and Betz's data, Stephens et al. (1975) reported that for the 11 female therapists in their sample, there was essentially zero correlation between their A-B scores and their patient improvement rates. However, research on the personality correlates of A-B status found that these correlates were highly similar in samples of males and females (Berzins et al., 1972). This finding led Berzins et al. to suggest that female As and Bs could be expected to perform comparably to male As and Bs on personality grounds. The small number of females in Whitehorn and Betz's therapist samples in conjunction with the seeming consistency of the personality correlates of A-B status across the sexes seemed to indicate that further investigation of

the effect of females' A-B status on relationships with patients was warranted. In general, when patients in the present study experienced their relationships with As and Bs as different, these differences held for females as well as male staff. Only one A-B status x staff sex x patient characteristic interaction effect approached significance: Non-schizophrenics tended to find male Bs more talkative than male As but did not differentiate between female As and Bs. However, since the total patient sample in this study tended to perceive female staff as more talkative than male staff, a global impression of females' talkativeness may have influenced nonschizophrenics' ratings of female As and Bs. Although this study's evidence for the comparability of A-B status in males and females is based on the few results which approached significance, the results are consistent with Berzins et al.'s (1972) findings on the personality correlates of A-B status in males and females. Thus, it seems that Stephens et al.'s (1975) negative finding for Whitehorn and Betz's 11 female residents should not be seen as generalizable to all female helpers and that the performance correlates of A-B status in females should be assessed in further samples.

A consistent but unpredicted pattern in the results was that patient characteristics seemed to affect ratings of Bs more than ratings of As. Considering the three A-B status x patient characteristic interaction effects which approached significance, schizophrenics and non-schizophrenics differed more in their ratings of Bs than of As in relation to both ease in talking to (difference in mean ratings = .49 and .14, respectively) and promptness (difference in mean ratings = .63 and .22, respectively) while males and females differed in their ratings of

of Bs but gave comparable ratings to As in relation to ease in talking to (difference in mean ratings = .35 and .02, respectively). Similarly, examining the one A-B status x staff sex x patient characteristic interaction effect which approached significance indicates that schizophrenics and nonschizophrenics differed more in their ratings of male Bs than of male As in terms of talkativeness (difference in mean ratings = .49 and .11, respectively). In the above differential ratings of B staff, nonschizophrenics rated Bs higher than did schizophrenics in all three interaction effects involving diagnosis while females rated Bs higher than did males (as mentioned above, 11 out of the 21 female patients were diagnosed as nonschizophrenic whereas 16 out of the 26 male patients were diagnosed as schizophrenic).

Previous A-B research on therapists suggests an explanation for the above pattern of results. This research indicates that B therapists may differentiate more between at least schizophrenic patients on the basis of severity of disorder than do A therapists. Betz (1963b) reported the differential success rates of A and B therapists with process and non-process schizophrenics: "A reliable higher success rate is found for A than B psychiatrists (71% vs. 18%) with the 'process' patients, generally regarded as the more serious diagnostic category. This success differential is largely eradicated with the 'nonprocess' patients (As, 68%; Bs, 44%)" (p. 1090). Stoler (1966) had A and B psychiatric residents listen to tapes of "process" and "nonprocess" schizophrenics. A therapists rated the schizophrenics as more likeable than did Bs. There was a significant difference between Bs' ratings of "process" and "nonprocess" schizophrenics, Bs' finding "nonprocess" schizophrenics more like-

able. A therapists did not differ significantly in their ratings of the two types of schizophrenics.

Whitehorn and Betz (1957) reported the improvement rates of A and B therapists with schizophrenic patients who had been treated by psychotherapy alone and with schizophrenics who had been treated by psychotherapy combined with insulin shock treatment. For patients treated in psychotherapy alone, As averaged an improvement rate of 81.5%, Bs 34.5%. Patients treated by psychotherapy combined with insulin had an improvement rate of approximately 82% whether they had an A or a B therapist. Whitehorn and Betz compared the clinical styles used by A and B therapists when treatment included insulin and when it did not. B therapists used the tactical pattern of "active personal participation" with 54% of their "psychotherapy and insulin" patients in contrast with only 9% of their patients in psychotherapy without insulin. Whitehorn and Betz suggested that the more frequent use of "active personal participation" by B therapists may account in considerable part for the greater numerical improvement of Bs' "psychotherapy and insulin" patients. No noteworthy differences were evident between A therapists' clinical styles with patients treated by psychotherapy alone and with patients treated by psychotherapy combined with insulin.

The above results indicate that when schizophrenics present less pathology either because of somatic treatment or better prognostic status B therapists like them better (Stoler, 1966), become more involved with them (Whitehorn & Betz, 1957), and have higher improvement rates with them (Betz, 1963b; Whitehorn & Betz, 1957). A therapists, however, do not seem to differentiate in their responses to schizophrenics based

on their degree of pathology. Extrapolating from these results to the present research, the uniformity across schizophrenics and nonschizophrenics in their ratings of A nursing staff in contrast to the differences in their ratings of B staff may reflect As' and Bs' actual pattern of response to them. Thus, similar to A therapists who did not differ in their liking for "process" and "nonprocess" schizophrenics (Stoler, 1966) and in their clinical styles with schizophrenics treated with or without insulin (Whitehorn & Betz, 1957), A staff may not have differed in the relationships they offered to schizophrenics and nonschizophrenics. On the other hand, B staff may have offered a more positive relationship to nonschizophrenics than to schizophrenics. B therapists' greater liking for "nonprocess" than "process" schizophrenics and greater involvement with schizophrenics treated with insulin than with those treated without insulin seems to indicate a preference for patients whose symptomatology is less severe and/or is less schizophrenic in nature. Thus, assuming personological similarity with their therapist counterparts, B nursing staff may have preferred the nonschizophrenics who were less severely disturbed than were the schizophrenics and who by definition did not have schizophrenic symptomatology.

The proposition that the rating dimensions of promptness, enforcement of ward rules and regulations, and talkativeness would reflect general personality differences between A and B staff was not supported by the results of the present research. Extrapolating from differences in As' and Bs' interest patterns, social orientations, and values discussed in the previous A-B literature (reviewed by Heaton et al., 1975), it was proposed that in the context of the nursing role, B staff members would

be more prompt in responding to patients' requests and more strict in enforcing ward rules and regulations than would A staff members while As would be more talkative than would Bs. Since there was no A-B main effect in relation to the rating dimensions of promptness, enforcement of ward rules and regulations, and talkativeness, A and B staff members did not seem to differ consistently in these three aspects of their role performance, at least as seen by patients.

The interaction effects obtained between A-B status and patient characteristics did not support the proposition that the rating dimensions of ease in talking to, interest, and pleasantness would be more sensitive to differential compatibility with As versus Bs (based on patient characteristics) than would the dimensions of promptness, enforcement of ward rules and regulations, and talkativeness. While two of the three A-B status x patient characteristic interaction effects to approach significance were in relation to ease in talking to (patients' diagnosis and sex affected their ratings of A versus B staff on this dimension), the third interaction effect was in relation to promptness (with ratings of As and Bs affected by patients' diagnosis). The only A-B status x staff sex x patient characteristic of marginal significance was in relation to talkativeness: Nonschizophrenic patients found male Bs more talkative than male As while schizophrenic patients did not differentiate between male As and Bs.

To further explore whether A and B nursing staff came across as different kinds of people to patients, patients were asked to predict

the responses of one A male and one B male to the A-B scale.<sup>7</sup> A moderately strong relationship ( $r = .53$ ) was found between actual A-B scores and predicted A-B scores for the 13 male staff involved in this part of the research.<sup>8</sup> However, it seemed that this correlation was inflated by the relationship of staff's educational and/or social class background with both actual and predicted A-B scores. Inspection of the predicted A-B scores indicated that the staff members who were rated high on the A-B scale (i.e., in the A direction) tended to be those who were known to have gone to college. In terms of actual A-B scores, all four of the college educated staff scored above the cut-off point (the median score of 56) used to dichotomize staff into As and Bs for the analyses of variance while only three of the nine non-college educated staff scored above the cut-off point. Although based on few subjects, this finding is consistent with the hypothesis that A-B status is related to social class background, A status being associated with middle class backgrounds and B status with lower class backgrounds (McNair et al., 1962).

To control for the effects of education, the relationship between actual and predicted A-B scores was computed for the college-educated ( $n = 4$ ) and non-college-educated subsamples ( $n = 9$ ). Compared to the correlation for the total sample of 13 male staff, the correlations for both of these subsamples was lower. For college educated staff, there

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<sup>7</sup>As mentioned above, this part of the research was limited to male staff because of time considerations.

<sup>8</sup>As discussed in METHOD section, on one ward two male As were selected.

still seemed to be some relationship between actual and predicted A-B scores ( $r = .38$ ), while for non-college-educated staff, this relationship was quite low ( $r = .18$ ). Thus, patients may have stereotyped the interests of the staff to some extent based on their educational and/or social class backgrounds.

The suggested relationship between A-B scores and educational and/or social class backgrounds seems to provide an explanation for the comparability of male and female staff's mean A-B scores in the present study (55.6 and 54.5, respectively) in contrast to the differences between males' and females' A-B scores reported previously. In samples of college students, males' and females' mean A-B scores were found to differ significantly, with females scoring more in the A-direction (Berzins et al., 1972). Similarly, in a large sample of therapists, virtually all of the females scored as As while males' scores did not show this skew (Lorr & McNair, 1966). The use of college students and therapists in these two previous studies would seem to have resulted in male and female samples which were quite homogeneous in regard to their educational levels and social class backgrounds (predominantly if not exclusively middle class). In the present study, however, there seemed to be differences between the male and female nursing staff samples in their educational levels and perhaps also in their social class backgrounds. A larger proportion of the male than of the female staff at Westboro seem to have attended college. Informal contacts with male college students and college graduates at Westboro suggest that they take jobs as attendants to get experience in the mental health field and/or to pay for their education. It is a reasonable speculation that female college

students and college graduates may apply for these jobs less frequently because they are more afraid of the threat of violence involved in the direct care of psychiatric patients. The apparent difference in the distribution of college-educated staff between the male and female samples in the present study may account for the comparable mean A-B scores for the two sexes. That is, a tendency for females to score more in the A direction than do males may have been balanced by a tendency for college-educated staff to score more in the A direction than do non-college-educated staff.

Although the present research seems to indicate trends worthy of further investigation, it should be reiterated that these trends are largely based on a few results which attained but marginal significance. Staff's A-B status may have had such a limited effect on differential compatibility with patients because of the nature of the nursing role at Westboro. Unlike the therapist role investigated in previous clinical research on the A-B variable, the nursing role at Westboro tends not to involve a one-to-one relationship with patients. Responsibility for the nursing care of a particular patient is shared by the various nursing staff members on a ward at Westboro (the number of staff members assigned to a ward ranges from about 15 to 25). Different staff members perform similar functions (e.g., enforcing ward rules and regulations) in relation to a patient at different times. Because the nursing care for a patient is shared by a sizeable staff, staff members may not perform various nursing functions in relation to a particular patient with sufficient regularity for a patient to have clear impressions of individual staff members' role performance. Thus, a patient may tend more to form

a global impression of how well the nursing staff as a whole performs its duties.

In contrast to the therapist role, in which the primary function is to have an impact on patients' psychological well-being, the nursing staff at Westboro tend to define their primary function in custodial terms. They tend to see their role responsibilities as limited to taking care of patients' physical and medical needs, providing control, and attending to ward maintenance. Helping to resolve patients' psychological problems or even socializing with them tend not to be seen as role responsibilities. Patients' comments during the interviews tended to confirm that this is indeed the staff's role definition. As one male patient who had been hospitalized at Westboro several times commented, "They take care of your physical needs. I don't really have a sense of what they're here for, maybe just to control patients when they're violent, pass out meds [medications]. They don't talk to us at all. I would like someone who is more or less normal to talk to."

Although previous research has indicated the significance that relationships with the nursing staff can have for patients (e.g., Keith-Spiegel & Spiegel, 1967; Kotin & Schur, 1969; Leonard, 1973), the nursing staff's role in these settings may have been defined in more psychotherapeutic or interpersonal terms than is the staff's role at Westboro. Chastko et al.'s (1971) research on patients' post-hospital evaluations of nursing care seems to offer support for this contention. As part of their study, they asked patients to describe particular ways in which the nursing staff had been helpful or not. The reasons given for the staff's helpfulness were categorized as follows: (a) available, acces-

sible, and to have someone to talk to at times when something was bothering them, (b) accepting, nice, pleasant, and friendly, (c) encouraged to do things, and (d) helped to understand self better. The role functions of the nursing staff that Chastko et al.'s patients found helpful are quite different in nature from the custodial functions the staff at Westboro emphasizes. Because of the nursing staff's predominant custodial role definition, relationships with the nursing staff may not assume much importance for patients at Westboro. This seems to be the case, at least, for the patient quoted above, who after several admissions to Westboro, still did not "really have a sense of what [the nursing staff's] here for." Thus, in the present study, patients may not have noticed differences in the quality of the role performance of A and B staff because relationships with staff were not salient to patients.

The above explanations for the limited effect of staff's A-B status on patients' ratings found in the present research assume that A-B staff members differed in the quality of their role performance but that patients did not discern these differences because of limited contact with the staff and/or the lack of salience of relationships with the staff. However, the predominant role definition of nursing in custodial terms may not have elicited significant differences in the quality of As and Bs role performance. A helping relationship may need to be defined in more interpersonal or psychotherapeutic terms before the personality differences associated with A-B status have a significant impact on role performance.

Although the results of the present research offer little support

for the relevance of the A-B variable to nursing staff's relationships with patients in the state hospital studied, these results may not be generalizable to the nursing role in other treatment settings. In contrast to the predominant custodial role definition at Westboro, the nursing role may be defined primarily in psychotherapeutic terms within active milieu treatment programs. In private psychiatric hospitals and on general hospital psychiatric wards in the Boston area, members of the nursing staff tend to function in a counselor role in relation to patients, as well as having traditional nursing responsibilities (e.g., administering medication, providing control). As "counselors," the nursing staff are assigned on a one-to-one basis to patients. The counselor role involves developing relationships with assigned patients, being available to them, and helping to facilitate the therapist's treatment goals through structured interaction with patients. Since, as members of the nursing staff, counselors spend most of their work day on the ward, they seem to have more contact with their patients than do the patients' therapists. Investigation of the effect of nursing staff members' A-B status on their performance of the counselor role might be a fruitful area for further investigation of the A-B variable's relevance to helping relationships beyond the therapist-patient relationship. The similarities between the counselor role and the traditional therapist role (e.g., one-to-one relationship, emphasis on relationship formation) suggest that nursing staff's A-B status might have a stronger effect on their performance of the counselor role than was found for the custodial role in the present research. Also, the differences between the counselor and therapist roles (e.g., status of role,

amount of contact with patients, informality of contact) may help to delineate the characteristics of the helping relationships to which the A-B variable is relevant.

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## APPENDIX A

## The A-B Scale

Part I. Occupations. For each occupation listed below, indicate whether you would like that kind of work or not. Don't worry about whether you would be good at the job or about your lack of training for it. Forget about how much money you could make or whether you could get ahead in it. Think only about whether you would like the work done in that job.

Draw a circle around L, if you like that kind of work.

Draw a circle around I, if you are indifferent to that kind of work.

Draw a circle around D, if you dislike that kind of work.

Work fast. Your first impressions are desired here.

1. Actor.....	L	I	D
2. Athletic Director.....	L	I	D
3. Author of novel.....	L	I	D
4. Auto Mechanic.....	L	I	D
5. Building Contractor.....	L	I	D
6. Carpenter.....	L	I	D
7. Minister, Priest, or Rabbi.....	L	I	D
8. Farmer.....	L	I	D
9. Foreign Correspondent.....	L	I	D
10. Governor of a State.....	L	I	D
11. Interpreter.....	L	I	D
12. Locomotive Engineer.....	L	I	D
13. Machinist.....	L	I	D
14. Poet.....	L	I	D
15. Private Secretary.....	L	I	D
16. Shop Foreman.....	L	I	D
17. Toolmaker.....	L	I	D

Part II. School Subjects. Indicate as you did in Part I your interest in these school subjects, even though you may not have studied them.

18. Chemistry.....	L	I	D
19. Economics.....	L	I	D
20. English Composition.....	L	I	D
21. Languages, Modern.....	L	I	D
22. Physical Education.....	L	I	D
23. Shop Work.....	L	I	D

Part III. Amusements. Indicate in the same way as you did before whether or not you like these ways of having fun. Work rapidly. Do not think over various possibilities. Record your first feeling of liking, indifference or disliking.

24. Tennis.....L	I	D
25. Conventions.....L	I	D
26. Electioneering for office.....L	I	D
27. Symphony concerts.....L	I	D
28. Social problems movies.....L	I	D

Part IV. Activities. Indicate your interests as before.

29. Repairing electrical wiring.....L	I	D
30. Cabinetmaking.....L	I	D
31. Operating machinery.....L	I	D
32. Adjusting difficulties of others.....L	I	D
33. Expressing opinions openly, regardless of what others say.....L	I	D
34. Raising money for a charity.....L	I	D

Part V. Types of People. Indicate your feeling about these different kinds of people.

35. People who have made fortunes in business.L	I	D
36. Fashionably dressed people.....L	I	D
37. Independents in politics.....L	I	D

Part VI. Order of Preference of Activities. Indicate which three of the following ten positions you would most prefer to hold in a club or society by checking (✓) opposite them in column 1; also indicate which three you would least prefer by checking opposite them in column 3. Check the remaining four positions in column 2.

	1	2	3	
38.	( )	( )	( )	President of a Society
39.	( )	( )	( )	Secretary of a Society
40.	( )	( )	( )	Treasurer of a Society
41.	( )	( )	( )	Member of a Society
42.	( )	( )	( )	Chairman, Arrangement Committee
43.	( )	( )	( )	Chairman, Educational Committee
44.	( )	( )	( )	Chairman, Entertainment Committee
45.	( )	( )	( )	Chairman, Membership Committee
46.	( )	( )	( )	Chairman, Program Committee
47.	( )	( )	( )	Chairman, Publicity Committee

Part VII. Preferences between Two Items. Indicate here which of two different kinds of work or ways of doing things you like better. If you prefer the item on the left, put a check in the first space; if you prefer the item on the right, put a check in the third space. If you like both the same or if you cannot decide which one you like better, put a check in the middle row. Make one mark for each pair.

- |                                      |     |     |     |                              |
|--------------------------------------|-----|-----|-----|------------------------------|
| 48. Talk others into doing something | ( ) | ( ) | ( ) | Order others to do something |
| 49. Taking a chance                  | ( ) | ( ) | ( ) | Playing it safe              |
| 50. Work with few details            | ( ) | ( ) | ( ) | Work with many details       |
| 51. Listening to a story             | ( ) | ( ) | ( ) | Telling a story              |

Part VII. Your Abilities and Characteristics. Check in the first column ("Yes") if the item really describes you, in the third column ("No") if the item does not describe you, and in the second column (?) if you are not sure.

- |                                                              | Yes | ?   | No  |
|--------------------------------------------------------------|-----|-----|-----|
| 52. Am able to meet emergencies quickly and effectively..... | ( ) | ( ) | ( ) |
| 53. Stimulate the ambition of my associates.....             | ( ) | ( ) | ( ) |
| 54. Can be firm and show I mean it.....                      | ( ) | ( ) | ( ) |





How interested in you have each of the staff members listed below seemed to be? By "interested in you," I mean how much each staff member has seemed to care about you, how concerned about you each staff member

[illegible]

How strict have each of the staff members listed below been in enforcing ward rules and regulations?

Staff Member	1 Very Strict	2 Strict	3 About Average	4 Lenient	5 Very Lenient
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Staff Member					
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Staff Member					
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Staff Member					
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Staff Member					
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Staff Member					
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Staff Member					
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Staff Member					
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Staff Member					
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## APPENDIX C

## Informed Consent Form (Staff)

The purpose of this research is to understand better what types of people work best with various types of patients. Previous research has indicated that mental health workers differ in terms of their compatibility with different types of patients. Most of this previous research has looked at patients' relationships with their therapists (or case coordinators). The present research will study bases of compatibility between nursing staff members and patients. Nursing staff members were selected to be studied in the present research because they have often been found to be as important to patients as therapists yet they have been the subject of research investigations much less often than have therapists.

This research is being conducted by one of the hospital psychologists, Susan Gottlieb, M.S., in connection with her doctoral dissertation. Your participation in this research would involve your completing an interest scale, the A-B scale, and your providing some basic demographic information (e.g., your age, number of years working in nursing). This interview should take about 15 minutes of your time. The A-B scale has been used in much previous research on patient compatibility with mental health workers. It has been found that mental health workers with different interest patterns tend to differ in the types of patients they are most compatible with. The present research has as its focus whether patients can perceive differences between nursing staff members who differ in interests as measured by the A-B scale.

All the information I obtain will be strictly confidential. I will be the only person to have access to the research measures. These measures will be kept locked up off the hospital grounds. In writing up the results of this research, I will not provide any information which permits identification of any staff member who participated in this research.

Since this research has as its aim increasing our understanding of bases of helpfulness, this research has long range implications for improving the quality of patient care. Participation in this research will not, however, be directly beneficial to you. A summary of the results of this research will be available to all participants upon request.

Your participation is entirely voluntary, and refusal in no way affects your employment in the hospital. You may withdraw your permission and terminate your participation at any time.

I agree to participate as outlined above \_\_\_\_\_

Date \_\_\_\_\_ Witness \_\_\_\_\_

## APPENDIX D

## Nursing Staff Interview Form

Code no.: \_\_\_\_\_

Unit: \_\_\_\_\_

Team(s): \_\_\_\_\_

Number of days per week present on team(s): \_\_\_\_\_

Age: \_\_\_\_\_

Sex: \_\_\_\_\_

Current position at WSH: Head Nurse \_\_\_\_, R.N. \_\_\_\_, L.P.N. \_\_\_\_, MHA \_\_\_\_.

Length of employment at Westboro: \_\_\_\_\_

Number of years working in nursing: \_\_\_\_\_

## APPENDIX E

## Informed Consent Form (Patients)

The purpose of this research is to understand better what types of people work best with various types of patients. Previous research has indicated that patients seem to differ a great deal in terms of the kinds of people they relate to best. Most of this previous research has looked at patients' relationships with their therapists. Since nursing staff members also seem to be important people to patients and they have not been studied as much as have therapists, this research will look at patients' relationships with members of the nursing staff.

I am conducting this research as part of my doctoral dissertation in clinical psychology. I am asking your permission to meet with you for about one hour to find out your impressions of members of your ward's nursing staff. You will be asked to fill out some forms to indicate these impressions. This information will be strictly confidential. Your name will not be recorded on the forms you fill out. In writing up the results of this research, I will not provide any information which permits identification of any person who participated in this research. Your participation is entirely voluntary and refusal to participate in no way affects your treatment in this hospital.

I agree to participate as outlined above \_\_\_\_\_

Date \_\_\_\_\_ Witness \_\_\_\_\_

APPENDIX F  
Patient Information Form

Age: \_\_\_\_\_

Sex: \_\_\_\_\_

Marital status: single \_\_\_\_, married \_\_\_\_, separated \_\_\_\_, divorced \_\_\_\_,  
widowed \_\_\_\_

Education (in years): \_\_\_\_\_

Occupation: \_\_\_\_\_

Father's occupation: \_\_\_\_\_

Date of current admission: \_\_\_\_\_ Date of interview: \_\_\_\_\_

Date of first hospitalization: \_\_\_\_\_

Number of previous hospitalizations: \_\_\_\_\_

List of previous hospitalizations:

From	To	Hospital
_____		



